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THE IMPORTANCE OF MEDICAL ORGANIZATION IN SECURING AND ENFORCING MEDICAL LAWS.*

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Repeated efforts to secure medical legislation in Tennessee had failed up to 1889. Our state society had time and again adopted resolutions commending medical legislation as a thing to be desired—an end to be attained—had gone so far as to approve the outlines of a medical act presented, and had appointed a committee to look after the matter at the next meeting of the legislature, even allowing the individual members to expend money (their own) if they so desired, to secure the passage of some act. I say permitting them to spend their own money if they saw fit, as no appropriation was ever made to aid the laudable purpose. Failure after failure was the result of such procedures. It must be remembered, however, that at that time (in the 80's) the Tennessee State Medical Society had a membership of less than 300, the larger percentage of those carried on its roll never being present at or participating in any of its meetings. With a profession in the state numbering 3,300, the state society could lay claim to from 8 to 10 per cent. of its physicians. It is not to be wondered at, then, that medical legislation was so hard to obtain in this state. What is true of Tennessee doubtless is true of most of the other commonwealths of our Union. So long as the profession took no interest in obtaining legislation nothing could be expected.

The first law passed in this state in 1889 was not what was wanted or needed, but was all that could be obtained, having become a law by one vote more than the constitutional majority demanded. The passage of that act was vigorously opposed by some members of our state society, they taking the position that to medical men belonged medical matters and that the politicians and legislators had no part or lot in such affairs. Yet when these opponents of medical legislation were confronted with the question of how to remedy the growing evils of all forms of quackery, no answer could be given by them. They took the position that each town, county or state should regulate its medical matters through the profession in the respective localities. Up to the passage of our first medical law no concert of action could be had on any medical matter. In state sanitation one faction opposed anything that another faction would suggest as right and proper to be done. In every city in the state there were as many factions in the regular profession as there were medical schools, plus one, namely, those who were not connected with any college, and then each other "ism" in medicine represented another dissenter from what was being done. So, then, in Memphis, with only one college, there were the college and anti-college factions, and in addition the eclectic and homeopathic set, though the two last named usually made common cause together; as at the time of the passage of the act of 1889, there were less than a hundred graduated eclectics and less than twenty graduated homeopaths in this state.

Nashville, boasting three white medical schools, had then always four factions, plus the one represented by the other two "isms." And so I might enumerate further. Each medical school was the best in its own estimation, and what one did the other did not; one favored chloroform as an anesthetic, the other ether; one advocated bleeding for puerperal convulsions, another gave chloral; one would press forward one of its own school for any medical position, and another would do all in its power to defeat the applicant and endeavor to supplant him with one bearing its colors. In each community the same condition of things existed. Not more than two physicians in any community were on social terms or often even on speaking terms, and this union of two arose from a community of interests, a common desire to down some other physician. It was a notorious fact, known not only to the medical profession of the state but to the laity also, that but few physicians in a given locality were willing to consult with each other, even in emergency cases. In reply to a call to see a patient, too often the answer was, "Dismiss Dr. A. and I will call and do what I can for you, but I do not speak to or recognize Dr. A. professionally," and Dr. B. was equally as ready to reply in like manner if asked to see a patient under the care of Dr. C. But I need go no further along this line. What was true of Tennessee was equally true of many if not most of the other states.

The first register made of the profession in this state when the act of 1889 was passed, which required every physician in the state who was engaged in the practice of medicine on the 4th day of April of that year to make proof of that fact, either by witnesses or by the presentation of his diploma, showed that of the nearly 3,300 physicians reported by the various county court clerks as complying with the act, 47 per cent. were non-graduates and 53 per cent. were graduates. Of the non-graduates many had never been inside of a medical college of any kind. If any had ever, prior to April 4, 1889, administered a dose of castor oil to a child or adult (though he were a member of his own family) and could prove the same by two reputable witnesses, he was permitted to qualify as a legal practitioner and such registration was reported to the secretary of the board of

* Read before the Mississippi Valley Medical Association, Memphis, Tenn., Oct. 7, 1903.

examiners, and under the law he was forced to accept the report as true, even though he knew the facts to be as above suggested. We could not go "behind the returns." A united profession had not demanded the passage of the act, and those who had, were compelled to be content with what could be gotten, and then to try to mold public opinion favorable to it.

In one of the counties of the state where a county medical society had been in active existence since 1882, it was not difficult to have at each succeeding county convention her nominees for the legislature instructed to support any medical legislation desired by the county society. The members of the medical profession in that county were not politicians in the sense of seeking office, or of neglecting their professional duties, but each one felt the full measure of the duties of a citizen resting on him to take part in his district and county convention, and did not hesitate to say that he favored this or that candidate. The physicians in that county were model citizens—men who thought about public matters and could readily give an answer to questions in regard to such matters, especially those pertaining to the affairs of their state, that might be propounded to them.

Other counties where no such organization existed, where personal rivalries and professional jealousies precluded the possibility of a medical organization, could do nothing. No united front could be presented by the physicians on any public question, and when Dr. A. ventured to call on his nominee for a promise in regard to medical legislation, he was met with the reply that Dr. B. had just made the opposite request, that he should oppose any such legislation, and that such being the case he could not bind himself to any special line of conduct in regard to these matters. When any medical question was up for discussion and a vote drew nigh he conveniently absented himself or voted in the negative. As county medical societies increased in numbers, medical legislation could be more and more easily attained.

In 1897 it became possible for us to get an amendment through both houses by good majorities requiring all, whether graduates or not, who desired to begin the practice of medicine to come before the board for examination. The same legislature passed a law distributing the unclaimed dead from our penitentiary and insane asylums between the medical colleges of the state. In the next legislature the medical students in the colleges in Nashville raised a sum of money and secured the services of attorneys (one of them being a member of the legislature) to have the amendment of 1897 repealed. These students from every quarter of the state appealed to their senators and representatives to vote for repeal of the act on the ground that a diploma obtained on three courses of lectures should be sufficient license on which to base a right to practice medicine. When a few members of the medical faculties in Nashville attempted to stay the current in favor of repeal, they were met with the threat that unless they ceased their efforts, which were beginning to avail, against the repeal, the "Stiff Bill" would be wiped off of the statute books. All ceased opposition, with the exception of a representative or two from one of the colleges, and left medical legislation to its fate. To these exceptions all honor is due. There was not enough of union or unity of purpose to enable and induce all to act together. The loaves and fishes of self-interest outweighed the claims of the whole profession. As with individuals, so it seems to have been in medical schools. The fear of individual loss causes many to do what they would not otherwise do. This plain statement of facts is not intended to be nor is it a reflection on the medical profession of Tennessee. No doubt under the same or similar circumstances in other states, there would have been the same results. There was no organization among the schools or medical profession at that time. Politicians knowing that condition to exist, availed themselves of professional jealousies to accomplish the emasculation of medical law. The result of this amendment of the medical restrictions in this state, caused the profession to realize the necessity of "getting together," and at the next meeting of our state society, which was held in April of that year in Nashville, the physician who delivered the welcome address said with much emphasis that the time had come when every member of the legislature who had voted to virtually repeal all medical restrictions in the state should be remembered by the physicians in every county, and their return to the next legislature prevented so far as medical opposition could avail.

Medical organization received a fresh impetus in this state from the stab it had received in what should have been the house of its friends. But in reviewing the action of the legislature of that year, a different course could not reasonably have been expected. The students were organized from all parts of the state to secure the repeal of the "examining clause," and the profession of the state left the examining board alone to oppose such action—six men resisting 500, not one of the six being related by any ties to any member of the legislature, while many of the students were either sons or nephews.

Wherever the medical profession has presented any semblance of a united demand for any legislation, it has been gotten not only in this state, but in all others of the body politic. No man wields more influence in his own voting precinct than does the physician who lives and practices therein, if he be what everyone who claims to be a disciple of Æsculapius should be. As stated by Dr. McCormack in an address before the North Carolina State Medical Association, the physician should be the best man in every sense of the term in any community. He should be well educated, well dressed, of irreproachable morals—should be, to sum it all up, a man *"sans peur et sans reproche," "sans tâche."* I desire to add that he should be not only such a man as portrayed above, but he should be a good citizen. He should take an interest in public affairs, should have an opinion about public matters, and should not hesitate on proper occasions to give expression to those opinions. He should not obtrude himself or his opinions on others, but when called on he should be ready to give a reason for the faith that is in him. A physician who knows nothing outside of a medical book may be fit to live in a city, but we in the country do not want him. There must be in him a large element of common sense in addition to book erudition. As was said by Dr. I. N. Love in the *Medical Mirror:* "He should not begin life as a physician with the idea that he can not also be a citizen in the true sense of the term." Anyone can be, as the Latins expressed it, a *"homo,"* but not everyone a *"vir."* A physician must be more than a human being—he must be a manly man who takes part in all public matters and is not afraid to express an opinion about them when occasion demands. He must not carry a "chip on his shoulder," for some one will knock it off;

he must not attempt "to face both ways on his horse"; he can not do it. It has been truly said that you can fool some people all of the time and all of the people some of the time, but you can not fool all of the people all of the time. A physician should be a Christian gentleman, and if you want a type of such an one as a model study, take Nehemiah of the Old Testament. Be what he was and you will fill the full measure of your citizenship.

With these requirements met as to the personnel of the profession and county and state organizations, any legislation, as already stated, that is desired and that can be defended as just and equitable, as protecting not the profession of medicine alone, but as safeguarding the interests of the *"hoi polloi"* as well, can be secured. But one objects that this idea of obtaining medical legislation through organized medicine is abandoning an old landmark, is dabbling in politics, or as our "holier than thou" brethren are pleased to say, the "dirty pool of political scheming." The very reason that politics has in these latter days become dirty is due to the fact that the better element holds itself aloof and allows the government of most of our municipalities and too often the legislatures of our states to be dominated by the rabble.

Dr. Hawley, in a paper[1] read before the American Academy of Medicine at Saratoga, made the following correct statement about the relation of the physician to politics:

> In every community the physician is looked on as belonging to an educated, cultured and refined profession. He is naturally accorded a high position to make an impression on public opinion. The physician, by his preliminary and professional training, possesses a degree of mental vigor and refinement above the average citizen. Further, the physician, and especially the country physician, from the nature of his calling and environment is a close observer and generally a correct interpreter of his observations. Thrown continuously in contact with important and vital questions, and often on his own resources alone, he learns to observe carefully and quickly, to reason rapidly, and to act at once. He is a man who is obliged to depend on himself, to draw his own conclusions and to work out his own problems. His daily work and experience, therefore, tend to cultivate a keenness of insight, a power of discrimination and independence of judgment, which will enable him intelligently to grapple with the important questions which are vital to the interests of his state or his municipality.
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> Further, the physician is better acquainted with men, and has a better knowledge of human nature than the average citizen, and, therefore, is in a position to understand thoroughly many of the requirements of the community. From technical knowledge and experience the physician is especially qualified to render valuable services to the community in matters relating to public health and sanitation, water supply, plumbing, drainage, sewerage, ventilation, schoolhouse construction, etc.

Another desideratum to be attained in connection with this subject of our organization is the lessening of the number of medical colleges run chiefly for individual profit; but as this subject was so ably handled by Dr. Frank Billings in his most excellent presidential address[2] before the American Medical Association at New Orleans, I will not consume your time in discussing it. In Tennessee we have seven white and five colored medical schools, besides one or two fraudulent ones, while our neighboring state of Kentucky, though not quite as well supplied, has enough and to spare. As the personal interest of the individual too often predominates over other interests, concert of action where so many schools exist—run in nearly all cases for the sake of making money—is a utopian ideal. Nashville and Louisville are each large enough for one school, and yet how many have each place?

Taking up the second branch of my subject, viz., the importance of medical organization in the *enforcing* of medical laws, I must be pardoned, should I make use of some ideas that I have already advanced in THE JOURNAL.[3] If it is difficult to procure medical legislation without medical organization, it is still more difficult to prevent the repeal of such laws and much more difficult to enforce them. Violators of the law will not oppose the existence of a statute—its presence on the statute books—unless it is enforced. So long as the law remains a dead letter it is not to be dreaded, but so soon as an effort is made to carry out its provisions, then it is resisted. In no state, perhaps, has a medical regulation act been passed which has not been attacked on grounds of unconstitutionality, and in most cases unsuccessfully. The highest judicial tribunals have almost invariably held such laws constitutional under the broad mantle of police supervision. When an effort to have such a law declared void has failed, the next step is to endeavor to influence the law makers to repeal, and, failing therein, to amend it in such way as to emasculate it, to render it powerless to accomplish that for which it was originally passed. The amendment is far easier to obtain than the repeal, and these amendments may be of such a nature as to appeal to the vanity of the legislators, such, for example, as exempting from the provision of the act graduates of state schools, and in this way render the act obnoxious to those who have seen fit to obtain a medical education outside of the confines of their own state. The plausible plea of encouraging home institutions and protecting their graduates to such an extent as to induce all to graduate at home, will have weight with many law makers, and on the floors of many law-making bodies the disinterested (?) member has been heard to declaim on the pride that one should take in a diploma issued by one of our great institutions of learning, the inside of none of which he has ever seen except as a mere passer through. These demands for amendment or repeal can be met successfully only as they were passed, by the efforts of a united profession. The same influences must be brought into action to prevent repeal or amendment as were used to secure the passage of these laws.

But when a law has been passed and its repeal or amendment has failed, the successful enforcement of it is perhaps the most difficult matter yet to meet. Many who have not complied with the requirements of the act are able to and do secure to defend them in its violation, some of the very men who voted to pass the law and even spoke for it originally. This I know to have occurred in our own state. All kinds of excuses are presented for failure to comply with the law—from ignorance of the existence of the law up to a refusal without excuse to comply with it. The numbers of physicians who belong to the lists of those neglecting and those defying is large and they, making common cause with traveling quacks and charlatans who furnished the money for the legal battles, present a menace to the successful enforcement of the medical laws.

Again, the profession is disposed to think that because the act gives the grand juries inquisitorial power

1. THE JOURNAL A. M. A., June 21, 1902, p. 1665.
2. THE JOURNAL A. M. A., May 9, 1903.
3. THE JOURNAL A. M. A., Nov. 16, 1901, p. 1201.

over all violators of the law, and because the judge is required to give the act in charge, that everything will be done that can be done without further action on the part of the profession. Never did a more erroneous idea creep into and take possession of the minds of reasonable and reasoning beings. The judge and prosecuting attorney were elected by the votes of their constituents, of whom the violators of the medical act are integral parts, representing just so many votes. Instead of charging the act to the grand jury, it is overlooked and neglected, or if it is given in charge, it is done in such a way that that body soon learns that nothing is expected or wanted by the judge along that line; and the attorney-general, who is serving for a fixed salary, summons no witnesses. If, however, the county medical society, an organized body, having on its roll every reputable physician in the county, furnishes him with the names of witnesses in any case and says to him that they demand that the law be enforced, then it is done promptly. What Dr. A. as an individual could not secure, Dr. A. or Dr. B. as the accredited representative of the county medical society, easily succeeds in getting done. But to depend on a salaried prosecuting official to attend to the violators of the law, is to show a willingness to leave them as dead letters. He feels that a prosecution of such cases will make the defendant and all his friends enemies of himself, and his work is done in a half-hearted way. To successfully enforce the law, an attorney must be employed either by the examining board or by the county society. An attorney acting for the board, the state or the county society will take a deeper interest in his work than a salaried official will do. With him it will be a matter of pride to convict the offender, while the salaried official will proceed in a perfunctory manner to discharge his duty, not caring for results. The attorney representing the board or society will know too that the continuation of his employment will depend on the zeal displayed in and the success of his efforts. An attorney who wins no cases will soon be replaced by another.

In this state it has not been difficult to secure convictions when we have proceeded as above, but a jury ordinarily assesses the lowest possible fine and if a number of indictments are not secured against the offender, but little is done to stop his illegal work. This is a serious trouble where advertisers who travel from county to county are concerned. They reap a rich harvest from their unsuspecting victims, and when arrested plead guilty before some magistrate, begging the leniency of the court, getting as small a fine as possible. This they pay, and at once leave for newer pastures further from the oversight of the board, where no organized medical society exists, and ply their trade rapidly until reported again. A new attorney has then to be secured before anything can be done, and in the interim they gather in the coin and are ready to pay the new fine and move. This can be kept up indefinitely when the medical profession lacks organization, but when they are organized they soon force the quack to leave the state; but when the county medical society lacks backbone enough to report such cases and to aid in their prosecution by securing an attorney willing and ready to act, no matter how zealous the board of examiners is, no prompt enforcement of the medical law can be secured. There must be the most hearty co-operation on the part of the board of examiners and the county and state organization. With such concert of action, the possibility of the medical profession, both in securing and in enforcing reasonable legislation, can not be fairly and fully estimated. In proportion as the individual failed, organized medicine will succeed.

Going a few steps farther than I intended as the scope of this paper, I may be permitted to add that when the American Medical Association has drawn into its folds the members of the medical profession who should legally belong to it, there will be no trouble to secure a department of public health, with a medical officer at its head as a member of the President's cabinet, and reciprocity in medical licensure will no longer be an idle dream. Uniform medical laws can be passed in all the states of the Union, with only such variations as may be demanded by the constitutions or laws of the different states; and then all the requirements can be made so nearly alike for license to practice medicine and the examinations on such an equal basis that a license issued in one state will be accepted in another without question.

SOURCES OF PLAGUE.*

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This subject involves a discussion of the early and present pandemics, cardinal features of the viability and dissemination of *Bacillus pestis* and the transmission of plague.

HISTORICAL SKETCH.

While indefinite statements regarding plague are found in the earliest writings, no definite knowledge of this disease has been found until the writings of Rufus of Ephesus regarding plague in Egypt in the second century B. C. At this time the disease was present in lower Egypt, spread along the coast of the Mediterranean and existed as a pandemic for an unknown period. Numerous detailed accounts give positive data that this pandemic was the same disease as that now known as bubonic plague. During this period war, drought and famines were prevalent throughout the world. During the centuries following this pandemic, numerous references to plagues are found, but each is too indefinite to warrant a diagnostication of bubonic plague.

In the Justinian age, beginning about 540 A. D., plague reappeared in pandemic form. Starting in lower Egypt, especially Pelusium, the disease spread along the shores of the Mediterranean to Asia Minor and Europe. In this pandemic plague existed in a given locality one, two or three years, disappeared to probably return at a later time. The nature of the disease was similar in most respects to what we now know as plague. This pandemic continued for fifty or sixty years, and in all probability gradually died out. In this age wars, droughts and famines were also prevalent. During the middle ages numerous references to plagues are found, but again they are too indefinite to enable us to distinguish the nature of the disease. It is most probable that plague played an important rôle in all these epidemics.

In the fourteenth century plague again reappeared in pandemic form throughout the civilized world. This time the disease began in western Asia, traveled to Asia Minor, thence to Egypt, Europe and Russia. During this pandemic some places were infected only a few

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. J. M. Anders, Frank A. Jones and W. B. Thayer.

months, others for several years, while in others epidemics continued for one or two years, after which the disease disappeared to again reappear after a longer or shorter time. Again, war, droughts and famine were prevalent. Several centers, so to speak, became temporary distributing points for the disease. Of these, Egypt in Africa, Turkey in Europe, and Syria in Asia were the most important. Again in these countries the disease remained more or less active for three centuries, giving rise, from time to time, to epidemics in neighboring countries. As the centuries wore on, the number of epidemics gradually diminished until 1841, when the last epidemic of plague occurred in Constantinople. In recent times Arabia was visited by epidemics in 1853, 1874 and 1879, Tripoli in 1874, Persia in 1863 to 1878, Mesopotamia from 1866 to 1876, and in Astrakhan in 1878.

From 1879 until 1894 the world was practically free from plague, but in the latter year an increased death rate among the Chinese at Hong Kong was observed, an investigation of which revealed the presence of bubonic plague, not only in Hong Kong, but also in Canton, where it probably came from Lientschau and Pakhoi. Since then the disease has spread to India, Japan, the Philippines, numerous ports along the route to Europe, South America, South Africa, Portugal, England, San Francisco, Mexico and many other localities. We are, then, in the midst of another pandemic of bubonic plague. Thus plague has spread over the world in at least four pandemics. First, in the second century, second in the Justinian age, the third in the fourteenth, and the fourth in the nineteenth century.

A brief summary of the observations on these pandemics reveals the following:

As to Origin.—No mention is made regarding the origin of the pandemic in the second century B. C. In that of the Justinian age the disease began in lower Egypt to spread over the then known world. During this pandemic new infected centers of plague were established in western Asia, where the third pandemic in the fourteenth century arose. During the third pandemic new centers were established in southern China to give rise to the present pandemic in the neighborhood of Canton. Thus plague has shifted its home from Egypt to western Asia, and later to southeast China, remaining throughout the centuries in tropical and subtropical climates.

As to Infected Centers.—Probably owing to more accurate detailed records, plague has in each of the latter pandemics formed new temporary centers from which the disease spread over the neighboring countries. Of these, Constantinople in the fourteenth century, and Hong Kong and Bombay in the present pandemic are notable instances. In these centers the disease may occur from year to year or at irregular intervals in epidemic form, or its presence may be shown by occasional cases.

As to Routes Traveled.—During each pandemic the disease has followed the great paths of commerce. In the second century B. C. it spread along the coast of the Mediterranean; in the Justinian age, along the same routes to Asia Minor, thence to Europe and western Asia; in the fourteenth century, from western Asia to Asia Minor, thence to Egypt, Europe and Russia, and in the nineteenth century from south China to Canton, to Hong Kong, thence throughout the world.

As to Classes Affected.—All races have been affected, especially the lower classes. Among the higher classes, living in the better districts of a city, the servants, as a rule, suffered. History abounds with instances of domestic and wild animals suffering from severe epidemics.

As to Modes of Dissemination.—Here records are liable to lead astray, for even now much mystery surrounds the dissemination of plague. It has been noted that clothing and articles of commerce have served to transport the disease, and the migration of rats, etc., has been observed.

Historical Recapitulation.—In each pandemic a new endemic home was established, first, in Egypt; second, in western Asia; third, in southeast China; temporary infected centers were established from which the disease spread in epidemic form; given localities were again and again infected; pandemics lasted from fifty to sixty years; in infected centers plague remained more or less active for several centuries, and the lower classes were mostly affected.

As the present pandemic first originated in Lientschau, then extended to Canton, from Canton to Hong Kong, thence to the civilized world, it is important to relate briefly the existing conditions in south China. The entire southern portion of China is thickly inhabited, with a large number of densely populated cities. Of these the most important, geographically and commercially, is Canton, which is located on the Pearl River about ninety miles northwest of Hong Kong, with which it is in intimate intercourse by water and land. It is a filthy, densely populated, poorly constructed city, consequently unhygienic conditions exist. Living under these conditions, the natives have a lowered resistance to infection of all kinds, consequently epidemic diseases are most prevalent. On account of the filth and customs of the people, rats and insects are abundant. Similar conditions exist in all Chinese cities.

FEATURES OF THE BACILLUS.

The *Bacillus pestis*, discovered by Kitasato and Yersin in 1894, grows luxuriantly in all ordinary culture media, even under disadvantageous conditions. As our knowledge of this organism increases, its power to maintain life and virulence under unfavorable conditions becomes of more and more importance. It has been found that the organism lived nineteen days in the sunlight and twenty-three days in darkness, at ordinary room temperature; twenty-two days in a desiccator; eleven days in a thermostat; one hour in a temperature of 60 C., and fifteen minutes at 80 C. The German Commission found virulent organisms in sputum after ten days; Martini in sputum of a pneumonic case after seventy-six days; Abel in sterile water after twenty; Hankin in various cereals after thirteen; Jakote in buried plague cadavers after thirty, and in dried pulverized organisms of animals dead of plague after forty-eight. On dried paper kept in a thermostat, organisms have been recovered after forty-four days, and in direct sunlight, after from three to six hours. Under favorable conditions, as on culture media, the organism lives indefinitely. Its virulence, even in old cultures, is frequently as great as in young ones. The finding of bacilli which rapidly regained their virulence in cotton goods by Kitasato is one of the most important links in tracing plague from one country to another. When plague was discovered in Kobe, Japan, it was found that a large consignment of cotton goods had recently been received from Bombay. Two hundred tubes were inoculated with portions of these goods, from one of which a virulent plague culture was obtained. Several dead rats were also found in bales of cotton. It is more than probable that by this means plague was introduced into Japan.

These facts demonstrate the resistance of *Bacillus pestis* to dryness and a moderate degree of heat for an undetermined period, and suffice to explain the origin of succeeding annual epidemics in a given locality, and to show one route and means of carrying the disease from one country to another.

The susceptibility of rats, mice, domestic animals, flies, fleas, ants, etc., serves to preserve the life and virulence of the bacilli, and to spread them in accessible places. The migration of rats, etc., may serve to carry infection to neighboring districts.

As bacilli have been found in the blood during a period of forty-five days, and in sputum for seventy-six days, convalescent patients may be a means for carrying the disease from one district to another, or even to distant lands.

Returning to the origin of the present pandemic, it is more than probable that during the pandemic of the fourteenth century, or the numerous epidemics of the following three centuries, south China was visited by plague when a new endemic home was established. After an indefinite time the disease increased, extending by ordinary routes of travel, in merchandise, etc., from outlying districts to Canton, where, favored by the filthy, crowded condition of the city, an extensive epidemic immediately developed. Here merchandise of all kinds comes in intimate contact with infectious material, and undoubtedly harbors more or less bacilli. Hong Kong, the port of Canton, undoubtedly received its infection from Canton by means of merchandise, individuals who might have contracted the disease in Canton and developed it in Hong Kong, or possibly by means of rats boarding steamers at Canton.

Hong Kong is one of the most important shipping centers in the Orient. Here practically all vessels plying in Oriental waters touch for coal, cargo and the transshipment of cargo, all of which are handled by Chinese coolies who live in the plague districts of the city. In addition to cargo, rats in large numbers often board the steamers to be transported to distant ports.

In the spring of 1894 plague spread from Canton to Hong Kong, thence to a number of coast towns in southern China, and later to many distant ports, or in other words, the disease followed the ordinary routes of travel.

In the present pandemic Canton and Hong Kong are the chief distributing centers for the world, thus history is repeating itself. Consequently we may anticipate the presence of plague in these cities for an indefinite period to give rise to epidemics of plague at irregular intervals in various portions of the world.

TRANSMISSION OF PLAGUE.

Transmission of plague is best considered under the headings of portals of entry, direct and indirect transmission.

Portals of Entry.—On account of the absence of local reaction in the great percentage of cases much doubt exists as to the real portal of entry. This is made more prominent by the slight local reaction found in the small number of cases in which a primary sore is found. Here almost no change in the surrounding tissues are noted, frequently only a slight lymphangitis is observed, and usually the first lymphatic gland draining the infected area is the primary bubo. The absence of a slight local reaction about a primary sore leads one to think that a small wound in the skin might be infected without visible local reaction.

Experimentation on lower animals shows about the inoculated area an intense edema, more or less hemorrhage, and considerable infiltration, with the lymphatic glands draining this area enlarged, hyperemic, and often hemorrhagic. It must be remembered that in experimentation a very large number of bacilli must be inoculated. As in all of these experiments lymphatic glands draining the inoculated area are the first affected, it seems most reasonable to suppose that primary buboes in human beings indicate the region through which the infection was received. In the unshod Oriental races about 60 per cent. of primary buboes are femoral or inguinal, 25 per cent. axillary and the remaining cervical. These percentages fairly accurately represent the relative exposure of the several regions to infectious material. The relative frequency of primary buboes in children strengthens this supposition. Here the largest percentage is found in the cervical regions, next in the axillary and inguinal, and femoral least of all. It is well known that whenever possible a child will put everything into its mouth, and is inclined to play on the ground, where the hands are more liable to infection than the feet. As the larger percentage of cases are of the bubonic type, it seems most reasonable to suppose infection is received through superficial wounds in the skin and mucous membranes of the mouth and nose.

The apparent immunity of oil workers and those well clothed seems to favor the opinion that infection is most often received through the skin.

Wilms thinks the digestive tract is an important portal of entry, but numerous observers doubt its importance. In two epidemics I saw no evidence of infection through this tract. Experimentally primary mesenteric buboes have been observed.

Infection through the lungs undoubtedly occurs, especially in pneumonic cases. Deane considers the pulmonary tract the most important portal. If this were true, it would be as difficult to explain the absence of local pulmonary changes in the great percentage of cases as it is to account for the lack of local reaction in skin wounds. Again, it would be difficult to explain the distribution of primary buboes if the bacilli entered through the lungs.

Some evidence points to the sexual organs as a portal, but more observation is needed to establish this fact.

Direct Transmission.—Here the most important feature is the infected human body. As septicemia develops, all organs, secretions and excretions become infected. Of especial importance are the urine, feces and sputum. In pneumonic cases the sputum is laden with bacilli, and in delirious cases is a dangerous source of infection, as the bacilli may be spread broadcast about the room and over those in attendance. Here the resistance of the organism to dryness is of great importance.

Owing to hemorrhages in the stomach cases in which vomiting is present are liable to infect the surroundings. Pus from buboes and serum from primary sores, etc., are also infectious. The cadaver is teeming with organisms, consequently is a source of infection until destroyed.

Naturally, all attendants are continually exposed to these various sources of infection, and it is astonishing that so few of them contract the disease. Perhaps the constant exposure develops a sense of precaution carried out in the minutest details. Many instances of direct transmission of plague from lower animals to man are on record, but generally speaking, direct transmission plays an unimportant rôle in the dissemination of plague; as an evidence, the small number of attendants in plague hospitals contracting the disease may be cited.

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Indirect Transmission.—Here the degree of viability and virulence of the organism is an essential feature. As the *Bacillus pestis* is a long-lived organism, and as the excreta, etc., are ladened with bacilli, all material coming in contact with the sick or kept in houses in which patients have been kept may serve to harbor and transport infectious material to those handling these goods.

Dust arising from infected places may be infectious for an undetermined time, certainly much longer than was formerly supposed. No positive evidence to show that water may transmit the disease is at hand. Perhaps the most fruitful sources of infection are the dark, poorly ventilated, filthy houses inhabited by the lower classes. There the organisms might easily remain alive and virulent over long periods, to be picked up by the unshod or otherwise exposed inmates.

Perhaps the best evidence of the importance of indirect transmission is the fact that those well protected by good clothing and shoes and living in fairly good hygienic condition rarely contract the disease.

In conclusion, it may be said that plague sprang from Egypt, formed new endemic homes, and traveled along the routes of commerce. The *Bacillus pestis* is long-lived, and may be carried from place to place in merchandise, by rats, etc., and by convalescents; the disease thrives best in unhygienic places, and the lower classes are mostly affected.

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THE PROPHYLAXIS OF PLAGUE.*

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The *sine qua non* in plague prophylaxis is the diagnosis. This is not so easy a matter as some are led to believe. The many forms which plague infection may assume, taken together with its insidious character, the inexperience of the medical profession of a given place, may render its recognition extremely difficult, even notwithstanding the fact that accurate methods of examination can, with certainty, be relied on to detect it.

The chief difficulty, however, which confronts one is that it may be so easily diagnosed as one of certain diseases of local origin, which it may so closely resemble, that it is an easy matter to overlook it. If the first cases were of the frank type—the bubonic—the task would be made easy. As a rule, this does not occur, and the ease in recognizing them as advocated by some is more a theory than a condition.

The clinical manifestations of plague are almost as varied as those attributed to malaria. Cases may resemble in whole or in part, and have been confounded with anthrax, pneumonia, diphtheria, bronchitis, pleurisy, pericarditis, endocarditis, peritonitis, appendicitis, rheumatic, typhoid, typhus, relapsing and malarial fevers, miliary tubercle, dysentery, beri-beri, syphilis, venereal bubo, mumps, septicemia and adenitis.

While it goes without saying that if it were the custom or the rule to apply accurate examinations to all cases in the foregoing list, nearly, if not all, the first cases would be detected, but we know that there are so many obstacles in the way for such procedures that it would be impracticable to carry them out, even if the medical profession were willing or able to do so.

If, on the contrary, all the first cases of plague infection were to be found in well-appointed hospitals, where accurate observations could be carried out, these would give us little concern. But this does not obtain. The first cases, as a rule, do not go to hospitals; in fact, only a few filter in, the greater number being found in localities where one is least expecting them and usually among a class of persons who naturally oppose the unwarranted (?) and presumptuous interference of the health authorities, or the physician who may have suspicions. Many cases occur under these conditions, and are not seen by anyone before the services of an undertaker or coroner are required. It is remarkable how resourceful this class of persons is in attesting to the non-infectious nature of the malady which has carried off their relative and friend.

To give a few illustrative experiences on the difficulties of a diagnosis: A case of illness occurred in San Francisco which, clinically, was that of typhoid fever, and passed muster as such, and three weeks later the autopsy and bacteriologic findings were those of plague. Another case was clinically that of diphtheria, but no cultures were made from the throat; antitoxin was administered when the case was moribund. During his last hours, while in delirium, he coughed and spat in the nurse's face, some of the sputum entering the eye. The nurse was immediately immunized with a large dose of diphtheria antitoxin. Despite this precaution she became ill within less than 30 hours, and died of an acute fever four days later. Autopsy revealed an acute septicemia, due to plague. Another gave a typical clinical history of lobar pneumonia, and the death certificate was made out accordingly. The room in which the patient died was closed for two weeks, when it was occupied by a woman and child. Four or five days after occupancy both became ill, one with bubonic, the other with pneumonic plague. A case was diagnosed as phlegmonous erysipelas, and was treated as such for 10 days, but on postmortem examination plague bacilli were isolated from the phlegmonous tissues, the heart's blood and spleen. Another case occurring soon after certainly did present the evidences of acute myocarditis. The blood, however, showed leucocytosis and pest-like bacilli. The autopsy was confirmatory of plague septicemia.

In Hong Kong I saw in consultation a case which all of us agreed was one of acute appendicitis, requiring immediate surgical interference. The blood showed considerable increase in the number of white blood cells, and many malarial parasites. The surgeon concluded to wait until quinin had been administered. On the next day the patient was worse, temperature higher, slight effusion into the peritoneum. The operation was deferred, and death occurred on the next day. Autopsy revealed a plague infection of the retroperitoneal glands near the appendix. In a case of a child in Manila presenting all the symptoms of a catarrhal pneumonia, autopsy confirmatory, the bacteriologic examination showed the cause to be plague bacillus.

The macroscopic appearances of organs and tissues of pest infections are, as a rule, quite distinctive. There is a respectable number of these in which there is scarcely anything suggestive of plague infection; yet the bacteriologic examination will reveal pest bacilli in all. Mixed infections may also be misleading, as instanced in the case diagnosed as appendicitis and in cases of beri-beri with an intercurrent infection of plague.

A vessel arrived at one of our quarantine stations with many cases of beri-beri aboard. Several had died en route or soon after arrival. Specimens of organs removed from a case just dead were examined bacterio-

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. J. M. Anders, Frank A. Jones and W. S. Thayer.

logically and the pest bacillus isolated. The macroscopic, as well as the microscopic, appearances of the tissues were typical of those of beri-beri.

The lesions observed in a respectable number of plague cadavers, both in San Francisco and in Hong Kong, were about as varied as one could wish to see. Those in Hong Kong occurred at the time of year which might be termed, for want of a better name, the post-epidemic period when the disease was declining; that is to say, when the number of cases were fewest. In these, the frank bubonic type was of rare occurrence, the septicemic type preponderating. Probably many of these do occur during the time when the epidemic is at its height and are overlooked. These cases certainly do occur in the pre-epidemic period and are not recognized as plague. Some of these are mild, ending in recovery; others are disposed of under a mistaken diagnosis. Viewed from a public health standpoint, these cases are of the greatest importance, and are, it is believed, one of the chief sources perpetuating the infection. These are some of the obstacles which stand in the way of a correct diagnosis, and are mentioned simply to emphasize the importance of making a careful and painstaking examination of every case wherein there is a possibility of plague infection. If such could be done, the majority of these masked cases would be recognized, yet some will be overlooked, even after the most painstaking examination, because of our inability to isolate the organism *intra vitam* or postmortem.

Plague, like cholera or bacillary dysentery, may show the same variations of virulence. It may be at first slight, and require a time more or less long before it assumes a virulence sufficient to cause an epidemic. On the other hand, it may remain for a long time in a locality making but little progress. Climatic conditions play no small part in its epidemicity. In such places as Hong Kong, Canton, Amoy and Manila it is certainly influenced by the temperature and humidity. The disease begins to assume its epidemic character during the warm rainy season, gradually increasing in intensity until the end, when it declines. It has been noted that when the temperature reaches 80 F. and is constant it declines gradually, reaching its lowest ebb just before the rainy season begins again.

While this condition obtains in the aforementioned places, it shows quite the opposite in California, where the greatest number of cases have occurred during the dry season. Seasonal influences appear, then, to have also something to do with the type of the disease, particularly in Hong Kong, where during the rainy season the majority of cases are bubonic; in the dry season, when the temperature is high and constant, nearly all the cases are septicemic. Just why there are these variations in type, or frequency of infection, can not be explained.

The ambulant type is not so much a factor in the dissemination of plague as some have been led to believe. The experiences of the health authorities of Hong Kong, Manila and at the Japanese ports all agree that these cases are extremely rare. My own experience, while not so extensive as that of others, is confirmatory. During 1899 to 1901, in over 50,000 persons examined for the apprehension of just such cases, out of these not more than 6 suspects were found—two on a vessel undoubtedly infected. These were kept under surveillance and a most rigid examination made of them; yet, notwithstanding this, the cause was not found to be other than plague.

The disease is a filthy one, and, like water, seeks its level among conditions which are ideal for its propagation and dissemination. Some years ago I made a statement that so long as the Chinese exclusion act was in force there would be little or no danger of the introduction of plague from the Orient. Since then I have learned that the Chinese exclusion act does not exclude, in the strict sense of the word, and particularly so from a health standpoint. There is a constant interchange going on of the Chinese coolie population between China, the United States and its territories, this interchange being provided for by special regulations. There also must be considered a number of persons who are debarred under the provisions of the act who seek admission through other channels not contemplated or specifically provided for. There can be no question that a respectable number of such persons do gain entrance to the United States. Another feature in the trans-Pacific traffic is the increasing importations of commodities from the Orient, which must be given due weight as a factor in the transmission of plague. It is farthest from our purpose to cast undue reflections on our own people, but there are certain conditions at present existing and constantly increasing which can not be viewed without concern.

There are many localities in our country which by reason of climatic conditions and race habit are ideal for the propagation of plague. The constant influx of foreign populations of low standard gravitating to many of our urban centers, is gradually forming the nucleus of material for epidemics, and is by reason of this influx becoming a serious problem in our public health work. With regard to the Chinese population, it is without doubt the worst of all as regards plague. There are now about 120,000 Chinese located in the United States, the majority of whom are on the western coast. These are controlled, and I may say absolutely, by that great and powerful organization known as the Chinese Benevolent Association, or The Six Companies. The rule of this organization over its subjects is as autocratic as the Sultan of Morocco or the Shah of Persia. The Chinese of the eastern coast are controlled by another organization of similar nature which is no less autocratic. These two instances are cited to show the manner of controlling the Chinese, and because bubonic plague has appeared among this people, and for offering an explanation in part of the difficulties which have stood in the way of its eradication among them. Some observers believe that little or no progress will be made in the detection of cases of plague among the Chinese, if a postmortem examination is insisted on, because of the strong race prejudice against them, as it will tend to the concealment of cases and more harm will follow than good accomplished. From our own observations this is only partly true. It is not so much due to prejudice of the Chinese against the examinations so much as their fear of their tong, or tribal customs and government being interfered with by western ideas. The Chinese desire to be let alone. The depositing of their dead on the streets, the concealment of cases, or the surreptitious removal of the moribund to the "Halls of Tranquility" is not so much their fear of a desecration of the dead as that of interference with their commercial and social life by the sanitary authorities. A careful examination of all sick of a Chinese community where plague is once detected, and a postmortem examination of all dead is the only way in which all plague cases will be found.

MEASURES TO BE DIRECTED TO THE INDIVIDUAL SUSPECTED OF BEING AFFECTED WITH THE PLAGUE.

The suspected case should be isolated. The isolation should be all the term implies. Pending the completion of a diagnosis the same care should be exercised as if it were proven to be plague, and as soon as the examination is complete it should be removed to a hospital provided for infectious diseases, where the dangers of infection can be best controlled and where the case can be medically and humanely treated.

The premises in which the case is discovered should be regarded as infected—doubly so if it can not be definitely proven that the infection was contracted elsewhere. The house should be evacuated and be immediately closed. Sometimes, however, the condition of the case is such that it can not be removed; if so, it may be necessary to assume an extra risk and convert the premises into a temporary hospital. As soon as the premises are ready to be evacuated provisions should be made for not only the care and treatment of those sick, but of those who have been in contact with it. These should be under observation in a non-infected place long enough to demonstrate their freedom from infection.

The premises and contents should be disinfected immediately after their evacuation by persons who are thoroughly conversant with the work, by the following methods: (*a*) by gaseous disinfection; (*b*) by mechanical cleansing; (*c*) by chemical disinfectants; (*d*) by steam; (*e*) by burning.

Great care should be exercised in the application of measures for the destruction of vermin, not only in the house itself, but in the immediate vicinity. If rats or mice are found dead in these places a bacteriologic examination should be made of these places to determine whether they are infected, as much depends on the thoroughness in which this feature is carried out.

After completion of the disinfection the house should be thoroughly aired. The soil in and around the premises may be such as not to exclude the possibility of its containing the plague bacilli, and if such be the case, it should, of course, be subjected to such processes as would sterilize the surface at least.

Suspects may be divided into two classes: 1. Those coming in direct contact with the case. 2. Those who have not come in contact with the case, but who have lived in the same house or in close proximity thereto. These may or may not be in the incubative stage. If so, the advisability of administering prophylactic injections of anti-pest serum must be considered, or perhaps the protective inoculations of Haffkine.

Too much importance can not be given to the destruction of vermin, and should not in any case be confined to the premises or those contiguous thereto, but should include a careful search for sick or dead vermin in a considerable zone around the infected premises, together with the destruction of all vermin. The crusade against vermin should be conducted for a sufficient length of time to be doubly sure the danger of their infection is past. This does not mean a few weeks, but should be persistent for months, or even a year or more after the last case of human plague.

The crusade against the rat population in San Francisco during the past winter demonstrates that it is infected. Just to what extent it is not safe to say, as the number examined is entirely too small to base an opinion on, but so far it has shown a greater number of infections than has been observed in Japan; in fact, nearly as large as in Hong Kong. It is, therefore, not safe to say that because no pest rats are found for two or three months the epidemic among rats has disappeared.

There are many rats in San Francisco. Judging from my own observations, together with those of two of my colleagues, the number is beyond computation, especially so along the water front. In the Chinese quarter, fortunately, there are fewer rats. Possibly this may partly explain why there has been so few cases of plague, but even if it were so it does not lessen the danger of the rats becoming infected along the water front. It is safe, therefore, to state that the rat population of San Francisco is stationary, as the few destroyed is a mere bagatelle. What should be done is to institute a systematic and thorough campaign against the rat, which should take in the whole city.

(*To be continued.*)

[The discussion on the papers of Drs. Calvert and Kinyoun will follow the conclusion of Dr. Kinyoun's paper next week.]

ORTHODONTIC FACIAL ORTHOMORPHIA.

IMPORTANCE OF DIFFERENTIATION IN CASES OF APPARENT MANDIBULAR PROTRUSION.*

WILLIAM ERNEST WALKER, D.D.S., M.D.

NEW ORLEANS.

Quite a little has been written on the etiology and treatment of cases presenting the appearance of protrusion of the mandible, the "chin-cap" treatment being recommended in young subjects and the removal of sections from each side of the mandible in older patients, and of late much has been written regarding the technic of this latter operation.

In a recent article Dr. E. H. Angle mentions a case in which this operation was successfully done in St. Louis[1] and tells of a failure having been made in New Orleans.[2] I have heard rumors in New Orleans concerning this failure, but have never seen the case.

Much has been written about treatment and a little about etiology, but apparently very little thought has been given to diagnosis, and the object of this brief paper is to emphasize the importance of a correct diagnosis on which to base an intelligent prescription.

It appears to have been taken for granted that the case which has the appearance to the surgeon of being a case of mandibular protrusion must necessarily be such, but I think that by presenting a case illustrating the erroneousness of that assumption, I can make it evident that this is not a fact.

From boyhood this patient was in the hands of a prominent dentist, who more than once was asked if anything could be done to remedy the defect; the invariable reply being "No, except in case the patient be willing to undergo a surgical operation for the removal of a section from each side of the mandible." The patient, at the age of 19, called on me, and my first impression was, as his brother had previously told me, that his lower jaw was very prominent.

Study of the case, however, convinced me that it was very much less a case of mandibular protrusion and very much more a case of arrest of the superior maxillæ.

Without explaining the diagnosis to the patient, he was allowed to return to his dentist, to whom he stated that Dr. Walker had told him that his case was remedia-

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Stomatology, and approved for publication by the Executive Committee: Drs. M. L. Rhein, M. H. Fletcher and Wm. B. Walker.

1. Dental Cosmos, April, 1903.
2. Items of Interest, April, 1903.

ble without a surgical operation, and again the dentist expressed as his opinion that nothing could be done for him except the operation previously mentioned, and that if Dr. Walker could otherwise remedy the defect, and if the patient had confidence, a trial might be made.

I mention these details to emphasize the perfect satisfaction the dentist manifested in his own diagnosis and prescription, notwithstanding its erroneousness, and to thus emphasize the necessity for the word of caution I am uttering, in order that errors in diagnosis may be avoided, for, on the diagnosis the treatment depends, which makes for success or failure.[3]

The patient has been taking a rest for some months, waiting for the alveolar process to redevelop around the teeth in their new position, which has now taken place and we are about to carry the upper teeth a step further. This waiting was considered advisable in order not to carry the teeth too far away from the bone, and because it has been found that if these periods of rest be given, the teeth can be moved great distances, the alveolar process developing around the teeth in their new position just as it did originally, and as it does after fractures, provided that the teeth are held still.

We know that in some pathologic conditions in adult life there is a great difference in the ability of the alveolar process to reproduce itself, but the movements of the teeth in alternating periods of activity and rest so closely resemble physiologic processes that Nature assists us by placing energetic osteoblasts at our service.

In the present case, the space made by the moving forward of the bicuspids and oral teeth, has been closed by the moving forward of the second molars, assisted by the developing of the third molars for which room has thus been made.

The next step will be to apply an apparatus which I am now constructing and which will have the effect of moving the maxillary teeth forward, using the chin and forehead as anchorage. This apparatus will somewhat resemble a baseball mask, but will have to be worn only during the night, the molars affording anchorage to retain during the day what we have gained during the night.

I hope by limiting myself to this one phase of the subject to so focus your attention on the subject of differentiation as to give it sufficient emphasis to attract the attention of the profession to its importance.

DISCUSSION.

DR. EUGENE S. TALBOT, Chicago—It is necessary to understand the etiology in order to treat these cases successfully. It is unfortunate that in this country the majority of the men treating these cases are merely mechanics. Indeed, one of the best men in the country in this line of work says he doesn't care for the etiology, that it is enough for him to be able to treat the conditions. It requires a great deal of time and study to understand the manner in which these conditions are produced, and in order to study this one particular phase we must go back to the time of Aristotle. Aristotle laid down the law of economy of growth, whereby a structure or organ is lost for the benefit of the organism as a whole. All students in evolution have based their work on that law. This law of economy of growth is illustrated in many structures, but those of the face, jaws and teeth are the most important to us. They are being lost for the benefit of the brain. This is one cause for so much decay in the teeth, and arrest of development of the jaw results in irregularities. Man in his evolution has atavistic tendencies so that in those patients who are called neurasthenic and whom I call degenerates, in whom there is an arrest of development, there is also frequently excessive development. This is illustrated by the picture of Charles V. of Spain. History records that Charles V. suffered from indigestion all his life; that he could not eat, and that he kept ten cooks preparing foods for him. Two hundred years after his death a photograph was taken of his skeleton in the coffin, showing this type of face. With the mouth closed the upper teeth closed inside the lower jaw. At that time there were no orthodontologists, and therefore he could not have his teeth regulated. The lower jaw is a movable organ, and because of this it is frequently more fully developed than the upper, which, attached to the bones of the skull, becomes arrested in development and causes this marked deformity. It is possible that the lower jaw in some cases will be excessively developed and there atavism enters. If such cases are taken at the age of thirteen, when the alveolar process is in a constructive stage, there is a possibility of moving these teeth and having the alveolar process remain with them. If the correction is made at the age of 20 to 24, there is more force required, producing inflammation in the alveolar process and preventing its restoration. Therefore, I question how far an operator is justified in correcting irregularities of the teeth. I have known patients to suffer from one to three years from nervous prostration as a result of regulation of teeth by dentists who did not know they were operating on neurasthenics. I do not believe the ordinary dentist should undertake to treat these cases, but it should be done by one who is medically educated and familiar with the nervous system.

MR. T. E. CONSTANT, Scarborough, England—Very often in the condition where the upper incisor teeth appear to protrude we find that a study of the etiology results in showing a still greater deformity. In many cases diagnosed as superior protrusion the condition is really one of inferior retrusion. If a good bite is obtained after the teeth have been moved, the result ought to be permanent, but this will depend on how the teeth occlude.

DR. M. H. FLETCHER, Cincinnati—I fully agree with Dr. Talbot in his condemnation of the efforts of incompetent men to do this work. I have had three cases sent to me almost in collapse from the ineffectual efforts of men who apparently understand nothing about the work and who had no conception of the stress to the patient under these circumstances. These cases resulted in absolute failure and a wholesome fear on the part of the patient. The varying conditions of health, and the surroundings at home, have great bearing on these cases. I undertake to see that the child has the co-operation and encouragement of the home people. The child must have normal recreation and not too much study.

DR. H. E. BELDEN, New Orleans—I agree with Dr. Talbot that the operation carried on in adult life does not always meet with perfect success, especially where a good deal of motion is required. It is not only hard to move the teeth, but often difficult to retain them in their new position. An example is the case of a young lady whose teeth protruded so much that she could not cover them with her lips, and she was much disfigured. Ten years ago I brought the teeth back to their normal position with such success that she is often complimented on her fine teeth—but to hold them in position she still wears a retaining band every night. I agree with Mr. Constant that if the occlusion is good we are more apt to have a successful issue. We see many bridges which can not be worn because of inaccurate occlusion. On the other hand, we see bridges that have lost their attachments, and sometimes natural teeth which the patient can remove from their sockets and replace at will, but they can be retained and made use of on account of their bite.

DR. WALKER—Showing how little the treatment interfered with this man's nervous condition, I may remark that he took during the treatment a two years' course of law in one year and graduated. He has not yet secured occlusion. This we hope to obtain later. The patient tells us that he had not

3. Here the patient and others were exhibited, as were also plaster casts, showing the full-front face and profile of the patient before beginning treatment; and also casts of the upper and lower teeth in their relative position at that time; also casts showing the face, front and profile, and the teeth, two months and a half later. Casts were also shown showing the relative positions of the upper and lower jaws at the time of reading the paper, the patient being present for examination and for comparison with the plaster casts.

much pain, a little at the first. The bands worn were always stationary.

DR. M. L. RHEIN, New York City—It is unfortunate that a certain class of men in this country having a false sort of dental education with some mechanical dexterity, appear before the public as advertised specialists on orthodontia. I believe in stomatology as a specialty of medicine, but I am opposed to any further subdivision of the work. I believe that the stomatologist should have the entire care of the individual mouth under his charge and if the distinctive and individual portions of the work are to be divided up for the better method of execution, it all ought to remain under his personal supervision. The amount of damage that is done by men improperly qualified is very great. It is my opinion that work can not be commenced too early in these cases of irregularity. The same principle is brought out here as in the work of Lorenz. The softer the bones are when we handle them, the more easily are they molded and the better are the results. I have attempted a number of corrections after the age of twenty, and the results have never come up to my hope. It seems almost impossible to get occlusion, that is, what might be called self-locking. I have at present under treatment two patients aged 8 and 9 years. The parent had doubts whether to have work commenced at the time, and the opinion of a number of men was sought. A large number of the profession have the idea that work should be delayed until all the permanent teeth are erupted. I take exception to the view that the fixed apparatus for spreading the arch is less painful than a removable one. There is more than one way of applying an apparatus. I know of none that will work so painlessly and so easily as that devised by Dr. Ottolengui. I agree that if the work on the bones can not be done without giving pain and causing nervous tension there is a mistake somewhere, and that much harm will be done the child. These patients come to my office sometimes as often as four times a week without any evidence of nervous depression.

DR. WALKER, New Orleans—Dr. Talbot made a reflection on the effect of this work on neurasthenics. The child referred to is a most decided neurasthenic, but since I have been working on her teeth her health has been manifestly improved daily. As the treatment continued, her mental, physical and nervous condition became better. I think this has been partly due to the self-control I have caused her to exert. Heretofore the least disturbance would cause her to cry. Dr. Rhein has stated that the work should be practically painless. He is undoubtedly right. The old way of regulating with movable appliances did cause a great deal of pain and damage to the nervous system. With the fixed appliance, however, the soreness does not ensue. I have used Jackson's appliances since 1894. It is the system to use when the teeth are coming in. If the teeth are in place, a fixed apparatus is better because a greater force is required than can be secured with the Jackson appliance without producing soreness. I think no one system should be adhered to, but that the good from all should be selected for the case to which it is adapted. We should undoubtedly avoid producing pain on account of the injury to the nervous system. In cases in which not much pressure or a great degree of speed is needed I feel that a removable apparatus may be employed. Mr. Constant is correct in saying that many cases of inferior retrusion are diagnosed as superior protrusion and so treated and the patients, therefore, disfigured. In regard to specialization, I think more will be accomplished by a man taking up a specialty after a number of years spent in general practice, and then working in sympathy with the general practitioner.

A Cheap Method of Removing Silver Stains from White Fabrics.—Moisten for two or three minutes with a solution of bromin 5 in water 500. Then rinse in clear water. If a yellowish stain remains, immerse in a solution of sodium hyposulphate 150 in water 500. Rinse in clear water. This formula has been found especially useful for hospitals and laundries.—*Revue Médicale de l'Est.*

THE DENTAL PULP—VIEWED WITHOUT THE MICROSCOPE.*

THOMAS E. CONSTANT, M.R.C.S.
SCARBOROUGH, ENGLAND.

Before entering on the subject-matter of the present paper may I be allowed to express my appreciation of the honor conferred on me by the invitation this Section of the American Medical Association—an association which enrolls in its list of membership names which are known to and revered by scientists all the world over. The invitation was not accepted without diffidence, for the subject allotted is a narrow one and the investigators many and devoted—indeed, it may safely be affirmed that during the last decade no structure in the human body has been more often or more closely scrutinized than the dental pulp. The majority of the observers have, however, given most attention to those points which require the microscope for their elucidation, and it is partly on that account that I intend to-day to confine myself to the macroscopic aspect of the subject.

The human dental pulp has been arbitrarily defined by an American writer as commencing during the fourth month of fetal existence. Prior to that time it is the "dental papilla." This distinction is convenient, and, although I am ignorant as to whether it has been given general acceptance in this country, for the purposes of this paper I shall adopt it.

At the end of the fourth month of fetal existence dissection reveals the pulps of the milk teeth as translucent gelatinous substances which roughly correspond in shape to the crowns of the teeth which are respectively formed from them. They are generally described as lying in a shallow groove or gutter of bone which is all that exists at that period of what is later known as the alveolar portion of the jaws. The pulps are severally surrounded by a membrane to which they are not anywhere adherent except at their bases. Between the investing membrane and the pulp there is always a fluid which John Hunter likened to the synovial fluid in joints. In the case of the lower animals this fluid is often found in considerable quantity. The membrane is, of course, the tooth sac. What the fluid is I do not know. By stripping the periosteum from the jaws the tooth sacs and their contents can be removed entire from the gutter of bone in which they lie. At this period (fourth to fifth month) when the dental sacs have been thus removed the groove in which they lie is found to be traversed in the incisor region by slight ridges which form the commencement of the alveolar septa between the incisor teeth. On opening the tooth sacs they are found to be adherent below to the tooth pulps and above to blend indistinguishably with the oral mucous membrane. The apices of the pulps show signs of commencing calcification, the incisors being tipped with little caps of bony material. As calcification proceeds these caps gradually increase in thickness and extend downward over the sides of the pulps, and at the end of nine months of fetal existence the central incisors are about two-thirds calcified, that is to say, the edge of the calcified caps almost reaches the bony floor on which the pulp rests. In the meantime the bony gutter has undergone a marked transformation. Its edges have grown up around the

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Stomatology, and approved for publication by the Executive Committee: Drs. M. L. Rhein, M. H. Fletcher and Wm. E. Walker.

pulps, and the transverse ridges already mentioned have also grown up, forming complete septa between the developing incisor teeth. In the same way the pulps of the developing cuspid and molar teeth have been enclosed, bony septa, of which there was no indication at four months, having sprung up. Thus each developing tooth has become enclosed in a separate crypt, the floor of which is formed by the original gutter of bone, the labial and lingual walls by the upgrowth of its edges and the mesial and distal by the upgrowth of the bony septa. Most of the text-books state that it is about this time (nine fetal months) a roofing in of the crypts takes place by an arching over of the walls. Thus Broomell writes in describing the development of the crypts:

> Beginning with a simple groove, or gutter, into which the tooth follicles hang, the follicles exerting a controlling influence over its form. Next comes the appearance of septa between the anterior follicles, which at this period are somewhat irregularly placed in the arch, followed in a few weeks by a well-defined partition between the cuspids and molars, until finally, at birth, each follicle is enclosed in its individual crypt, with the single exception of the second molar, in which the distal septum, or that which is to separate it from the first permanent molar, has not yet made its appearance. As the tooth follicles increase in size by the development of the teeth within, they become more perfectly enclosed in the bony vaults, the sides of the alveolar walls arching over and almost completely enclosing the developing teeth.

Tomes, speaking of the condition of the mandible at the time of birth, quotes: "The alveolar margins are deeply indented with large open crypts." As a matter of fact, both of these descriptions are incorrect, for in the nine months fetus and at birth the crypts are completely closed. It is true that the bone which forms the roof of the crypts is very thin and parchment-like, but it is always there. Broomell is wrong, too, in his description in so far that he makes it appear that the roof is formed very late and by an arching over of the walls. The roof, such as it is, is complete before the bony septa between the various teeth; and what is usually described as a groove or gutter is really a tunnel with a very thin bony roof. There are one or two specimens in the museum of the Odontological Society of Great Britain which illustrate this very clearly. At birth, then, the dental pulps and their partially calcified crowns are completely enclosed in bony crypts. In any dry specimen in which this bony roof is found complete the external surfaces of the calcified crowns within the crypts are invariably found to lack the luster and vitrified appearance one finds on the surface of adult teeth. In a crypt from which the roof has been partially or wholly absorbed the tooth crown is found to be completely calcified; from which we may, I think, infer that completion of the process of amelification is the necessary prelude to absorption of the roof of the crypt. At the time when this absorption occurs the bases of the crowns are in closer contact with the floors of the crypts in which they are contained than at any other time, but there always intervenes, of course, the vascular tissue which marks the junction of the tooth sac and the pulp.

"But," I think I hear you saying, "what has all this to do with the dental pulp?"

Gentlemen, I wish to introduce that interesting structure to you in a new rôle. As the active agent in the formation of dentine we have all known it from our earliest student days. Those of us whose privilege it is to be engaged in the practice of dental surgery recognize it as the mutual friend at whose urgent persuasion the more reluctant of our clientele are induced to seek our society.

It is, however, in the unfamiliar character as the active agent in the translation of the teeth from the crypts in which they originate to the position they finally occupy in the mouth that I wish you to make the acquaintance of the dental pulp to-day. To do this it was first necessary to remind you of its anatomic relations, which have been altogether ignored by the authors of the various theories which from time to time have been advanced to explain that interesting developmental process which we term "eruption of the teeth." Before stating the case for the dental pulp let us pause a moment to consider these theories.

One of the oldest of them is that the eruption of the teeth is due to the elongation of their roots. As long ago as 1835 Thomas Bell wrote: "As ossification proceeds, the roots of the teeth continue to elongate, until first those of the incisores, and subsequently the others, can no longer be contained within the alveoli." This theory is still very popular, but against it the following insuperable objections have been raised: (1) That the distance traveled by the crown of the tooth is sometimes greater than the length of its root. (2) That teeth with comparatively little root sometimes erupt, while others with fully formed roots remain unerupted; and (3) that teeth with roots fully formed may remain unerupted for some length of time and then subsequently erupt.

The following quotation from an article by Dr. Pierce, entitled "The Eruption and Structural Relations of the Deciduous and Permanent Teeth," in the "American System of Dentistry" (1887) clearly shows that there are some writers who even yet regard this theory with favor. He says:

> The absorption of the superimposed tissue from the advancing crown, and the elongation or growth of the root by an increase in the pulpy mass or formative tissue and its calcification are the progressive developmental processes which we term "eruption of the teeth." The force by which the teeth are propelled toward and through the mucous surface into position, is thought by many to be something in addition to that indicated above as the result of normal growth.

In explanation of the eruption of teeth with unformed roots, Dr. Pierce writes in the same article:

> The question at once arises whether such premature presentation of the tooth crown is not wholly due to an absorption or wasting of the superimposed tissue, rather than to the elevation of the crown, which could not well take place without the growth of root, unless it were from the contraction or an expulsive effort of the tooth follicle.

The same writer offers the following ingenious explanation of the eruption of teeth with roots that were fully formed some time previously:

> There is a mechanical force, however, acting on all such teeth, tending to bring them to the surface, the same as on an unantagonized tooth, inducing its elongation or protrusion from the socket. The repeated closing of the jaws must exert to a large extent this mechanical force, just as the bung in a barrel is elevated by a blow being struck on the stave or either side of it.

Tomes' explanation of the same phenomenon is not quite so ingenious, but, as will appear later, is not less unsatisfactory. His account of the eruption of a canine tooth of a human female at the age of 45 is as follows:

> Supposing it, then, to be admitted that the tooth was completely developed before the process of cutting commenced,

the process in itself must be in some respects different from that which occurs when teeth are cut under ordinary circumstances. When the process is normal as respects time and the stage of development of the tooth, the crown appears through the gum long before the root has attained its full length. The crown is in great part brought toward the surface of the gum by the progressive lengthening of the root, and is afterward still further raised by the same process. Now, when the eruption is accomplished subsequent to the development of the root, the movement of the tooth must be effected by some other means than by the progressive lengthening of the root. The completed tooth has to change its place without itself undergoing any change. The bone which stands in its way must be absorbed, and the lower portion of the socket from which the root of the tooth emerges must be contracted by the deposition of the bone. Indeed, in the absence of a better hypothesis it may be assumed that the gradual contraction of the socket is the means used by Nature for bringing teeth to the surface when the process of eruption has been delayed beyond the normal period. In the one case the movement is effected by the development of bone within the alveolus, in the other by the progressive development and consequent lengthening of the tooth.

Another theory that for a time held sway was that of Delabarre. The following account of it from Harris' "Dental Surgery" (1863) is almost touching, and shows the fascination it exercised over lovers of analogy:

The able physiologist and learned dentist, Delabarre, has advanced a most ingenious theory on this subject. He believes that the passage of a tooth through the gum, or rather its escape from its crypt, is effected in precisely the same manner as is the birth of a child. He regards the sac attached above to the gum and below to the neck of the tooth as the chief agent in the eruption, and believes that it is by its contraction that the latter is raised from the bottom of the alveolus and ultimately forced through the dilated orifice of the capsule and gum. This is the most rational theory that has been advanced; it explains on principles of sound physiology this most wonderful and curious operation of the economy.

This romantic theory lost favor chiefly because its most ardent supporters were unable to demonstrate the slightest resemblance between the dental sac and the female organ to which they imagined it was analogous. It would not have been included here were it not that a passage in one of the above quotations from the writings of Dr. Pierce indicates that the theory has not yet lost its pristine power.

It must have been the improbability of Delabarre's theory that encouraged Coleman to propound another, the acceptance of which would involve the abandonment of existing views as to the growth and development of the jaws. He imagined the teeth to be carried to the surface by a series of "bone currents," in other words, by interstitial growth of bone peculiar to the jaws, and then laid bare by the absorption of the alveolar margins. The reluctance displayed by our leading physiologists to lay aside their views as to the growth of bone, and to accept Coleman's, no doubt largely accounts for the modified enthusiasm with which his theory has been received. The greatest objection to it, perhaps, apart from this is that while it accounts more or less satisfactorily for the eruption of the teeth, it fails to explain how it is that some teeth never do erupt. It is difficult to imagine a lateral or canine tooth stemming the tide of bone currents that its immediate neighbors have found it impossible to resist.

Another theory is that the teeth are raised by a deposit of bone at the bottom of the crypts in which they are contained; and yet another (which is the last to be considered here) is that the teeth are forced into their destined places by contraction of the alveoli. Of these two theories the latter would only account for the eruption of such teeth as have a single conical root, because in case of teeth with two or more roots such contraction would tend to retard rather than assist eruption; while the former rests on an assumption for which, as we shall presently see, there is absolutely no foundation.

I would here draw your attention to Figure 1 which represents a specimen in the museum of the Odontological Society of Great Britain. It shows as clearly as possible that the distance of the bottom of the crypt containing the second molar from the inferior dental canal is very little less than the distance of the apices of the roots of the first molar from the same landmark.

Fig. 1.—First molar. 2. Second molar. A. Inferior dental canal. M. Oral mucous membrane.

It is clear, therefore, that the eruption of the first molar could not have been due to bone deposition on the floor of its crypt. Reference to the same illustration will also convince you that narrowing of the alveoli containing the roots of the first molar would have retarded rather than assisted its eruption.

It appears to me that the chief objection to the root elongation and bone formation theories is a physiologic one. It is extremely difficult to conceive such a process as dentine formation exercising independent mechanical force. But, granting that it may be so, on what structure is that force exercised—in other words, to put the matter clearly and concisely, if somewhat vulgarly, what does the root shove against?

Since the forming root is never in actual contact with its bony surroundings, it must necessarily be against the

Fig. 2.—Section through a lower molar tooth.

vascular material in which it is embedded. Now, this tissue appears postmortem of far too jelly-like a consistence to oppose any effective resistance by virtue of its own structure—and yet such resistance there must be or the tissue would be obliterated. Whence, then, are its resisting properties derived? Necessarily from the blood pressure. Therefore, assuming that the physiologic process of dentinification can exercise independent mechanical force and is a factor in the causation of eruption it must, since action and reaction are equal and opposite, divide the honors with the blood pressure—a factor hitherto quite unrecognised. Indeed, it is obvious that any *vis a tergo* must act through

the vascular material surrounding the root; and it follows that such force can not be greater than the blood pressure or it would cut off the blood supply to the root.

But is a force other than the blood pressure a necessary hypothesis when we consider the exceptionally advantageous conditions under which it acts? Let us illustrate these conditions by a diagram (Fig. 2).

A, B, C and D represent a section through a lower molar tooth and its crypt at various stages of development. In A it is obvious that the pulp forms a fleshy column of vascular tissue on which the crown really rests. The pulp itself is injected by the force of the blood pressure entering almost directly from A', an artery of considerable size. Under the calcifying margins of the crown is the pad of tissue that forms the junction of the sac and pulp, and between the crown and the walls of the crypt is the vascular tooth sac which is injected from the same source as the pulp. Above the crown is the oral mucous membrane and submucous tissue. Now, it is obvious that the blood pressure exerted in the pulp tissue acts on the crown at a considerable mechanical advantage in comparison with the pressure in the tissues overlying the crown. Indeed, it is only necessary to glance at the diagram to understand how it is that some teeth travel so quickly to their destined position when once their crowns have emerged from the gum. In fact, with regard to this point, it is a marvel that dentists who have many opportunities of observing the rapidity with which teeth sometimes move during eruption should ever have been induced to regard the comparatively slow process of dentinification as the active agent in the matter. As eruption proceeds so does root formation, the former making space for the latter. Indeed, if I may be allowed to illustrate the process in a homely fashion and in the way it presents itself to me, the mechanism is somewhat similar to that employed by a sweep in cleaning a chimney. I do not know whether you, in this country, have improved on our method of "chimney-sweeping," so perhaps I had better explain that our sweep employs a circular brush and a bundle of rods with screw joints. He places the brush in the chimney and screws in the first rod, then he pushes the brush up the chimney the length of the rod and then screws in another rod, and so on. Now, the sweep represents the pulp, the force he uses to push the brush up the chimney represents the blood pressure, and the screwing in of a fresh rod represents the various stages of root formation.

Referring again to the diagram, we notice that each stage in the formation of the root diminishes the extrusive tendency of the pulp until when the root is complete it becomes practically *nil*. Moreover, after the tooth crown has emerged from the gum the tooth sac, which has now become the peridental membrane, forms a ligament for the tooth, being attached both to the roots and to the socket. The vascularity of this membrane still endows it, however, with an extrusive tendency which is in itself sufficient to account for the gradual elongation of unopposed teeth, and is probably the chief means by which the proper occlusion of opposing teeth is maintained. If we have any doubt in the case of healthy teeth as to whether this elongation is due to the normal blood pressure exerted in the peridental membrane they should surely be dispelled by the clinical phenomena that present themselves when the blood pressure is pathologically augmented—in other words, when inflammation of the peridental membrane supervenes. When we consider the mechanical conditions illustrated by the foregoing diagram in conjunction with the pulsating and expansive force exercised by the blood pressure does not the necessity for another eruptive force disappear and Dr. Pierce's bung-and-barrel explanation of the elongation of unopposed teeth become somewhat superfluous.

If we assume that the blood pressure, acting in the manner above described, is the sole active mechanical factor in determining the eruption of the teeth, will it account for the phenomena other theories fail to explain? That the crown of the tooth sometimes travels a distance greater than the length of its root, that teeth sometimes erupt subsequently to the formation of their roots, and that teeth with comparatively little root occasionally erupt, are facts all in favor of such hypothesis and can be explained by it.

The fact that teeth with fully formed roots remain unerupted can be more easily explained by this theory than by any other, because it alone can account for the space obtained for the fully developed roots which often occupy abnormal positions. In other words, the blood pressure, acting as it does equally in all directions, makes room for the developing root in the direction of least resistance. Normally this is in the direction of the advancing crown, but occasionally it is elsewhere. The continuous eruption of teeth with persistent pulps, which neither Delabarre's nor Coleman's theory could possibly explain, is a very simple problem if we admit the blood pressure as the active mechanical factor.

I am, therefore, of the opinion that on anatomic and physiologic grounds alone are we justified in assuming that *the blood pressure exerted in the vascular tissue which lies between a developing tooth and its bony surroundings is the active mechanical factor in the process known as the eruption of the teeth.*

So far the purely mechanical aspect of the question has been alone considered; but if your patience will endure the strain there are one or two points of physiologic interest that have so direct a bearing on the subject that it would be as well to include them here.

Some years ago I recorded the observation that in young people, when a back tooth had lost its antagonists, the characteristic elongation which takes place under those circumstances varied in cases in which the pulps of the unopposing teeth were dead from those in which they were living. In the former instance, although the elongation of the teeth took place, it was unaccompanied by any downgrowth (or, in the case of a lower tooth, upgrowth) of the alveolar ridge; whereas, in the latter case, there was a corresponding deepening of the alveolar ridge. In other words, in the case of dead teeth there was simply extrusion from the alveolus, but in the case of living there was growth of the alveolar ridge. It appears obvious, therefore, that the growth of the alveolar process is dependent on the integrity of the dental pulp; or, in other words, that the pulps of the teeth, as a whole, exercise a trophic influence with regard to the alveolar process. I am of the opinion that extirpation of the pulp of a tooth causes a marked and permanent alteration in the vascular condition of the peridental membrane—in fact, a disturbance of vasomotor equilibrium in the direction of a paralysis of the vasoconstrictor mechanism.

The foregoing remarks apply to both the permanent and temporary dentitions; but the pulps of the temporary teeth exercise another kind of trophic influence which seems to have escaped the notice of dental writers, namely, their influence on the process of resorption

of the roots of the temporary teeth. In the case of temporary teeth, in which the pulps are destroyed at the time when resorption of the roots should commence, resorption, strictly so-called, does not occur at all. In such cases a certain amount of absorption of the root, as a rule, takes place, just as it often does in the case of dead permanent teeth, the macroscopic appearance of the roots in both cases being strikingly similar. This absorption is a pathologic process and differs markedly from the physiologic process of resorption. It is a much slower process, and that is one reason why we so frequently find the apices of the roots of dead temporary teeth protruding from the labial or buccal surfaces of the alveolar ridges, causing that ulceration of the mucous membrane of the cheeks or lips with which we are so familiar in the case of children whose milk teeth have been neglected.

The explanation of this common phenomenon is simple. The death of the pulp of the temporary tooth has left its root incapable of resorption and its socket prone to degeneration. Absorption is too slow a process to make room for the crown of the permanent successor which soon impinges on the dead root, deflects it and thrusts its apex through the degenerated alveolar process and the superjacent soft tissues. In those cases in which death of the temporary tooth has taken place some time after the process of resorption has commenced and the root is, in consequence, shortened, the pressure of the advancing permanent tooth simply tilts the root until it takes a nearly horizontal position; the crown, if any remain, being correspondingly deflected. Other phenomena which admit of a similar explanation are familiar to us all, and need not be enumerated.

From the time when the dental pulp is "nothing more than a part of the mesoblastic myxomatous tissue of the jaw, which has become more rich in vessels and cells than the other neighboring part" up to the time when commencing senile degeneration presages the termination of its physiologic activity, it is one of the busiest exponents of local government observable in the whole domain of human physiology. While it is hard at work constructing the tooth it regulates the blood pressure that causes that organ to travel to its appointed place in the mouth, at the same time building up the bony walls that enable that pressure to act at a mechanical advantage. Then, in the case of the temporary teeth, it superintends the demolition of the very structure it has been at such pains to create; and finally, in the case of the permanent teeth, it controls the nutrition of those parts on the integrity of which the tooth is dependent for the proper exercise of its function. Thus we are able to understand the otherwise inexplicable phenomenon which Tomes aptly describes in the following words: "It is impossible to insist too strongly on the fact that the sockets grow up with, and are molded around, the teeth as the latter elongate. Teeth do not come down and take possession of sockets more or less ready and pre-existent, but the socket is subservient to the position of the tooth; wherever the tooth may chance to get to, there its socket will be built up round it. On the proper appreciation of this fact depends our whole understanding of the mechanism of teething; the position of the teeth determines that of the sockets, and the form of pre-existent alveolar bone has little or nothing to do with the disposition of the teeth."

[The discussion on the symposium of papers by Drs. Constant, Morgenstern, Causch and Römer will follow the paper of Dr. Römer in a later issue.]

THE IMMEDIATE RELIEF OF HYSTERICAL MANIFESTATIONS OF THE LARYNX.*

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Hysterical manifestations in the larynx are common enough to fall frequently into the hands of every laryngologist. The treatment likewise is successful enough to warrant an almost positive promise of relief in at least the majority of cases. There is, however, much to be learned, both as to the development of newer and more satisfactory methods and as to the reasons for the successes in individual cases.

It is in view of these circumstances that I present my method which, though original with me so far as I know, may yet have been used by others. I do not assert for a moment that the method results in anything but a relief from the laryngeal symptoms or that monosymptomatic hysteria exists, and that, therefore, the symptomatic relief is tantamount to a cure. Nor is it certain that the relief is of any longer duration than that from other plans. But it is clear that the method is simple, absolutely painless, easy of application and withal successful.

All plans of treatment have as their basis the deception of the patient, or, perhaps I should say, direction of the patient's mind away from false conceptions toward possibilities that are within his reach if only he will utilize them. In other words, suggestion in one form or another is used. This may be extended over a period of time, or it may be so decided that it is effective at the first sitting. To the former class belong such plans of treatment as manipulations of various kinds and operations distant from the seat of the symptoms. Often, too, operative interference in the neighborhood of the larynx or applications to the larynx or pharynx will be followed by relief after a longer or shorter time. Consecutive treatment of any kind may have a similar effect in ridding the patient eventually of his symptoms. Immediate suggestion, on the other hand, is mainly used through the medium of a strong electric current which is sent through the larynx, and generally becomes effective at once.

The method which I desire to detail is of this type, but it requires no instrument except the index finger and a ready tongue on the part of the operator.

At the first sitting, having recognized the case as one of hysteria, I state to anyone who happens to accompany the patient that the case is quite clear and easily relievable, but, turning to the patient, I say: "You must agree to let me do what is necessary. I can not consent to undertake the treatment unless you are willing to submit yourself to the treatment." The patients invariably say that they are willing to stand anything provided there is any likelihood of a cure. Of course, I give an absolute promise as to relief and send the patient home to think and to worry about it, or, if it is desirable, proceed at once to work. In any event, I generally deliver a short and more or less sentimental talk to aphonics on the word "home," which I state is the first word that they will utter, the most beautiful and easiest to pronounce in the English language. Having secured the requisite confidence and interest, I place the patient on a chair and I insert the index finger of the right

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hand into the pharynx and press the epiglottis over the glottis until the patient becomes somewhat uncomfortable, when I withdraw my finger and say in a loud commanding voice, "Now, say 'home, home, home!'" The patient responds and the command is continued as often as necessary until the patient repeats not only "home," but any word suggested, and leaves the office talking as well as anyone. At the next sitting I look into the larynx and state that everything is in perfect shape and the treatment concluded.

Of course, the character of conversation must be modified as the requirements of the individual demand, but in the main the procedure above indicated may be adopted.

In my earlier cases I stated that there was a dislocation or defect in the larynx which my treatment would relieve, but I now make no statement of what I affect to discover in the larynx in consequence of the advice given to me by Dr. Schwab. He called my attention to the fact that hysterics are prone to adopt suggestions to their own detriment, although the suggestion be made for their relief. In two of the three relapses the error of this plan was shown. In the first case one of my patients (which one, I do not know) called on my assistant during my absence in Europe and said that she had another dislocation in her throat and that I had cured her before by sticking my finger down her throat and invited him to do the same. He did so, and she became phonic again.

In the other case, that of hysterical mutism, the recurrence, I am sure, was made possible by my error in detailing the supposed cause.

The cases to which the method has been applied cover the whole range of the commoner hysterical manifestations of the larynx, such as aphonia, mutism and cry. The result was in every instance successful except in one not reported here for the reason that I did not have a fair opportunity to do the necessary work. The case was one which I saw for a few moments only in the office of Dr. Freudenthal of New York during a visit to that city. The case was a very obstinate one, having been the rounds of laryngologists without benefit. The Doctor had been unable to relieve her, and asked me to try my plan. Of course, I could not and did not secure the patient's confidence and, therefore, nothing resulted.

The cases which I report will fairly demonstrate the variety of conditions that may be relieved and likewise the method of applying the suggestion. Of course, in every instance, I explained the nature of the condition and the character and true facts of the treatment to some sensible member of the family. To do otherwise would have placed me in the ranks of the charlatans. The responsible member of the family is entitled to know that there is no real operation, and that the method used is purely one of suggestion. It is best, generally, to postpone giving this information until just before resorting to the suggestion. Of course, it is necessary to enjoin the informed not to let the patient know the true facts and not to discuss the condition with the patient or friends.

General treatment is indicated in all these cases, especially such as may influence the hysteria, which is the basis of the condition that causes the patient to consult a laryngologist.

Summary of Cases.

Case 1.—*Hysterical Aphonia, Paralysis of Adduction.*—My first case was that of a girl, aged 17, who came to my clinic suffering from the classical symptoms of hysterical aphonia. After showing her to my students and demonstrating the hysterical paralysis of adduction, I endeavored to pursue the usual plan of sending a current of electricity through the larynx. My battery was out of order, so being at a loss for an agent with which to influence the patient, it occurred to me that I might accomplish the same result by suggesting that something was dislocated in the larynx which I could easily replace and thereby accomplish a cure. Somewhat to my surprise the patient recovered her voice as soon as I withdrew my finger and announced that everything was in proper order again.

Case 2.—*Hysterical Aphonia, Adductor Paralysis.*—In January, 1900, I was asked by Dr. Jacob Geiger of St. Joseph to see a young girl, E. B., aged 13, who had been suffering from aphonia for six months. This had come on suddenly and had not yielded to treatment, which had been, in the main, nerve and blood tonics and sprays. There was no previous history except an attack of acute rheumatism some years before. The girl was of a very lively, nervous disposition, very capricious and somewhat anemic. Having learned of the case beforehand, and readily recognizing the condition, I had sent word to the mother that her daughter would speak within two minutes after I saw her. As a consequence of this the patient was prepared for something extraordinary. I made a hurried examination and confirmed the diagnosis and stated to the patient that if she were willing to submit herself to the treatment, however severe it might be, I would have her saying "home" in less than a minute. She consented. I adopted the usual plan, and withdrawing my finger suddenly, commanded her to say "home, home, home." She did so, and acting on my direction she called up her grandfather by long-distance telephone and within three minutes after I saw her she was talking to him in proper voice for the first time in six months. There has been no recurrence, as I learned from Dr. Geiger, under whose charge the patient now is.

Case 3.—*Hysterical Aphonia, Adductor Paralysis, Anesthesia of the Pharynx, Hysterical Cough.*—The father of A. B. had written to me, in May, 1900, from Louisiana describing his daughter's condition. He stated that she had lost her voice suddenly eight weeks before, and since that time could whisper, but not phonate. He asked me to telegraph if I could relieve her. Knowing well what the effect would be on the young lady, I telegraphed to him that I could cure his daughter. As I surmised, when she arrived she was perfectly satisfied that I would cure her, and I had little difficulty in making her have full confidence in what I promised. As usual, I advised her that the operation which I should perform would necessarily be a severe one. She stated she was willing to stand anything. Unfortunately, a well-disposed patient, who became acquainted with the one whose case I am reporting, assured her in a sympathetic way that the operation would not be painful and that she need not have any fear. To this I lay the necessity of making three efforts before I was successful. I found the patient, when she came into my operating room, very much calmer and not disposed to fear the operation. After I withdrew my finger the first time, her voice was slightly more phonic. Looking into her throat I stated that the cords were not in proper position. I made another effort, this time with more success, for now she spoke in a rather hoarse but fairly phonic way. After examining the larynx I stated that it was almost in the exact position which I wished it. The third effort was successful. Since that time there has been no return whatever. Curiously, after the disappearance of the aphonia she developed a hysterical cough, which, however, lasted only a few weeks. Dr. Bauduy, who examined the case, confirmed the diagnosis of hysteria. The mother was intensely hysterical, and immediately after the young lady's voice returned I isolated her from her mother for three days, fearing the effect of her sympathy and the maternal hysteria. In this case during the attack the cords could not be approximated, during the efforts at phonation the space between the arytenoids being fully 7 millimeters. Anesthesia of the pharynx was marked.

CASE 4.—*Hysterical Aphonia.*—F. M., aged 22, first lost her voice suddenly in September, 1900. One week later it returned suddenly. Two weeks after this the voice again disappeared suddenly and reappeared within one week. The last attack came on a month before she consulted me, which was on Dec. 18, 1900. This attack differed somewhat from the other in that she could not even whisper at first, but a week before she began to whisper again. There was no pain, no discomfort and no globus hystericus. Her general health was good, but she was somewhat anemic. Previous health had been good. I made an examination, stated that there was a condition in her larynx that required immediate attention, lectured to her on the easiest word in the English language, namely, "home," assured her that this would be the first word she would speak, and having thoroughly frightened her, secured her consent to go through the necessary performance on the following day. She returned very much worried, very much interested, and determined to undergo anything to recover her voice. The usual plan was adopted and her voice returned immediately, and there has been no recurrence of the aphonia since.

CASE 5.—*Hysterical Mutism, Adductor Paralysis, Hemianesthesia, Anesthesia of the Pharynx.*—I was consulted in November, 1900, by Mrs. M. G., a widow, aged 41, who presented the following history: In February, 1899, an operation was performed on the right axilla. After this she remained in bed for four months. July 1 she found it impossible to phonate, her voice becoming suddenly of a whispering type. Aug. 2, 1899, her voice was lost altogether, it being impossible for her even to whisper. Since that time she has been unable to phonate or to whisper. She stated that she had never been able to speak in a loud tone since the operation, and evidently ascribes her trouble to the operation. There was no definable cause for either the whispering or the attack of mutism. She states she had a choking sensation, after which her voice disappeared. Her mother died of consumption when the patient was 5 years old. Her father died in the Army from a wound. There was no nasal discharge and there were no symptoms of throat trouble, except that she complained that her throat felt sore on the right side (the side on which the operation was performed). She had frequent attacks of headache of the migraine type, both sides being affected. The attacks came on without any special regularity. There was no cough, no expectoration, no clearing of the throat. Her appetite was fair; her bowels regular; no difficulty of respiration; occasional choking sensation at night; general condition fair. Both Dr. Chaddock and Dr. Schwab, who examined this patient at different periods, found unmistakable evidence of hysteria, and numerous stigmata, such as hemianesthesia, anesthesia of the pharynx, etc. The patient, who had been suffering from mutism for 16 months, was brought before my class, giving me an occasion to make a distinct impression on her as to the seriousness of her condition, the possible severity of the operation and the beautiful influence of the word "home," the first word which she learned she was to speak in 16 months. Of all the patients whom I have treated in this way she was most affected. She responded at once to treatment and her voice returned. On Sept. 25, 1902, she again consulted me on account of the loss of voice of two days' duration. I found a very acute inflammation of the pharynx, tonsils, lingual tonsil and larynx. The usual remedies were applied, and though the acute inflammation disappeared the aphonia continued. It was evident that she remembered her previous attack, and was probably influenced by a fear that there had been a second dislocation in the larynx. Not desiring to complicate the matter, as it was evident that suggestion in this case had as much power for evil as for good, I concluded to use another method in this case. Consequently, I made an application to the lingual tonsil of a strong solution of nitrate of silver, having stated to her without undue explanation that she would be enabled to talk immediately thereafter. Success followed this application.

CASE 6.—*Hysterical Aphonia, Hoarseness.*—Miss M., aged 24, consulted me in December, 1900, on account of her hoarseness, which had lasted for six months. Two years before I had endeavored to relieve her of hysterical aphonia by galvanization with but indifferent success. She could phonate at times, but her voice was always hoarse, while she had occasional relapses into complete aphonia. Her general health was fair, though she was nervous and disposed to be melancholic. One sister suffered from melancholia for two years, but finally recovered. Examination showed that the vocal cords did not approximate when phonation was attempted. The usual plan was followed, and although such a case could not offer the same promise as one of complete aphonia, the patient entirely recovered, and has continued free from trouble except occasional attacks of hoarseness, which, however, last but a short time.

CASE 7.—*Hysterical Cry.*—I. S., aged 13, consulted me in April, 1901, at the instance of Dr. B. L. Dorsey, with the following history: She had been more or less sick all winter with what was designated nervous prostration. Other than this there had been no trouble except painful spots along the right leg. About three months previous to this time the peculiar shrill cry first appeared and within the limits of its characteristics it had continued since that time. The cry did not appear until 4 o'clock in the afternoon (after school) and it continued at intervals of from one and a half to two minutes, until she went to sleep. From that time until the succeeding day at 4 o'clock she was free from its presence. The cry, which lasted about two seconds, resembled the sound of a prolonged *si*, and the intensity was about that of the voice of a child when calling another at some distance away. The quality, duration, pitch and intensity, so far as I could observe or learn, were about the same under all conditions, whether the child was on the street or in the house. The girl was very much mortified about her condition, and strove to conceal it, manifesting great disinclination to leave home. Examination of the nose, pharynx and larynx showed nothing abnormal. Dr. Chaddock found stigmata of hysteria, which naturally confirmed the diagnosis. Although this case hardly afforded the scope for suggestion after the method detailed that the aphonic cases offered, it was finally decided to adopt the same plan. Accordingly, after the usual preliminaries and after being assured by the patient that she was willing to stand anything which would afford relief, I inserted my finger into the larynx until she became very uncomfortable, and withdrawing it, suddenly, I said, "Now you are all right!" I then examined her larynx and stated to the Doctor and mother that everything was now perfectly normal. Since that time she has never had a single attack. I saw her last in March, 1903.

CASE 8.—*Hysterical Aphonia, Anesthesia of Palate and Pharynx.*—Miss E. P., aged 27, referred to me by Dr. F. J. V. Krebs, Dec. 1, 1902, lost her voice six months ago. Two months later without apparent reason her voice returned. Two months later it again disappeared, and since that time, although much had been done to relieve her, the aphonia persisted. The patient's health had been fair, but she was nervous and easily excited. On attempted phonation the cords would move spasmodically to and fro with a short range about 5 millimeters from the median line and would finally come to rest in the position of complete abduction. Palate and pharynx were anesthetic. After the usual preliminaries, I inserted my finger into the larynx and, withdrawing it, I ordered her to say "home, home, home!" She responded in a fairly loud voice. As I continued to direct her to say this and other words, I noticed that there was still a tendency to aphonia in that she would quite often whisper the word instead of saying it aloud. I then asked her to sing "home, sweet home," and with the assistance of my own somewhat discordant tones she sang the song and the aphonia left her. Three months later there was a recurrence, which readily responded to my suggestion which comprehended an inspection of the larynx, an expression which indicated that I understood the condition and the introduction of the finger without comment. Since this she has had no further attack.

DISCUSSION.

DR. FRANK W. HILSCHER, Spokane, Wash.—The method of treatment is on the principle which Dr. Mulhall of St. Louis described ten years or more ago. I remember seeing in his clinic a case of hysterical aphonia, treated by inserting a wet sponge electrode into the pharynx which frightened the patient so that he made an exclamation. The patient was then commanded to speak on penalty of a repetition of the operation. This same patient would lose his voice occasionally, relapsing into the former condition, but the physician had no trouble renewing the suggestion, going so far that he actually produced the suggestion by telephone. That was done in at least one case of which I know, and he told me that he had accomplished a similar result in a number of other cases.

DR. J. F. BARNHILL, Indianapolis, Ind.—I consider this paper as one of distinctive value. Cases of hysterical aphonia exist, and when we are consulted concerning them, knowledge of a certain method such as Dr. Loeb suggests becomes as valuable to us, trivial though the method may seem, as is the technic of the most complicated surgical procedure. I have treated some cases of this kind, one lately, in which there were lingual tonsils. I assured the patient that the removal of these would result in the cure of her ailment, and verified the prediction to the satisfaction of all concerned. I desire to ask Dr. Loeb two questions: 1. Has it been his observation in the class of cases he has described, that the pharynx and larynx are in an anesthetic condition? 2. He stated that the epiglottis is pressed down with the finger until there is considerable discomfort. Is it the intention to cause the patient pain by this pressure, or are we to understand by the term discomfort that some degree of asphyxia is produced?

DR. H. DUPUY, New Orleans—The success Dr. Loeb obtained from positive hypnotic suggestion promises excellent results in these cases. A girl of 19, a religious enthusiast, came to my office with an acute case of hysterical aphonia. I examined the parts thoroughly, and by way of suggestion I told her that there was something up behind the nose that caused the disturbance. I introduced my finger and made the manipulations we usually do for the recognition of adenoids. Her voice was immediately restored. Several months afterward the aphonia recurred and she was unwilling to again undergo what she considered a heroic maneuver. I would like to ask Dr. Loeb whether he has had any recurrences, and what is the longest time in any case in which there has been no return of the aphonia.

DR. C. M. COBB, Boston—I was told in the Hospital for Epileptics that there is often some serious constitutional idiosyncrasy or dyscrasia back of hysteria and that these patients often become insane or have tuberculosis later. The same suggestion was made by Dr. Edes of Boston. He said that he used to consider them almost immortal, but that they are not; the death rate among them is much higher than among normal individuals. I am very glad Dr. Loeb has given us the details of his treatment by suggestion. Probably every one who has practiced medicine any length of time has invented a method of suggestion of his own. One physician's method was to talk with the nurse outside of the door within the hearing of the patient, in the case of a married woman, for example, as to whom the husband was likely to marry if the patient did not recover. The nurse would suggest someone and the physician would say that it met his approval, since the woman was good and strong. The result would be that the patient recovered her voice speedily.

DR. H. W. LOEB, St. Louis—Personally I knew nothing about hypnotism or suggestion previous to this work, and I know now practically nothing about it. I have been forced to report this method, which differs from the other methods in its systematic performance. These patients, however, are prone to accept suggestion, not only for their relief, but also to their detriment. In one case, for instance, the patient came to have a new dislocation restored. In Dr. Barnhill's case an operation was found necessary; it is possible that that woman will have some operation performed on every part of her anatomy before she is through. Those are the cases the neurologists complain that we treat with the ablation or supposed ablation of some organ, and the disease returns again and again. Such conditions as anesthesia and hemianesthesia may be relieved in the same way as aphonia. If we use heterogeneous suggestion we may often make mistakes. In the last few cases I have said nothing about the condition found; I simply look at the larynx and say that I will be able to cure the trouble. One case is of at least two years' standing. The pharynx is not always anesthetic, but it is often so in hysterical cases. As to the discomfort resulting from the treatment there is, of course, no pain, but only an impediment to respiration. I occlude the larynx until there is a distinct impression from the suffocation, then withdraw the finger and command them to speak and they simply can not help talking. I hope the members will use this method with caution, not to use a suggestion that may be duplicated and do the patient harm.

THE TREND OF MODERN PSYCHIATRY AND ITS RELATION TO GENERAL MEDICINE.*

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Amid the kaleidoscopic changes incident to modern medical progress, none are more conspicuous and striking than those which pertain to the study of psychiatry. To the average practitioner medical psychology was until within a very recent period, a sealed book, and even to-day its study is greatly neglected by many of our medical schools and colleges.

This indifference is well understood, however, when we remember the hypothetical character of former available knowledge concerning morbid psychical phenomena, as well as the difficulties which beset its practical clinical application in general medical practice. Moreover the numerous exigencies that belong to the care, management and treatment of the insane soon led the general practitioner to lose interest in its study, and all such cases were willingly referred by him to those members of our profession whose tastes or opportunities led them to select this form of practice, hence, the alienist became through sheer force of circumstances the first in chronologic order of medical specialists.

As insanity at times requires rigid isolation, hospitals devoted to the exclusive use of the insane were imperatively demanded, but cheerfully supplied from the generous funds of the state treasury. Owing to the extreme magnitude of such hospitals their control became a very tempting prize for rival political parties to possess, hence their management was soon added to the political spoils system.

The universal adoption, however, of this diabolical political practice imposed a great injustice on the unfortunates who were compelled to submit to its evil consequences, beside proving a serious hindrance to the progress of scientific psychiatry. Moreover the exclusive character of the work soon led the medical officers to separate themselves from the rest of the medical profession, which had the baneful effect of not only dwarfing their own medical growth, but also retarded the study and development of psychologic medicine. Not all of the medical officers were tainted with this special vice, but the general correctness of the assertion can not successfully be denied.

Without any desire to be pessimistic, and duly recognizing that in the development of the modern insane or psychopathic hospital with all its scientific paraphernalia

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Nervous and Mental Diseases, and approved for publication by the Executive Committee: Drs. Richard Dewey, H. A. Tomlinson and F. W. Langdon.

nalia, our forefathers necessarily were compelled to pass through the period of what may be termed the mechanical stage of construction, at which time, perhaps, the size of the hospital, together with its more purely mechanical devices, such as the washing machines, steam cooking utensils and the electric lighting apparatus, was even of greater importance than its purely medical equipment or the more strictly scientific methods belonging to the study of psychiatry, yet we believe the time has now come when these purely mechanical matters can safely be left, in a large part, to others, reserving at the same time the right of the medical superintendent to be the chief ranking officer, to whom all such matters can be referred for final judgment, while his first and chief duty, as well as those of his assistants, should be the scientific study of insanity, as well as the best means for its appropriate care, prevention and treatment.

That this ideal is far from being realized in several of our state institutions, at the present time, is clear to all thoughtful physicians, and that many of them are still practically owned and controlled by the politicians is common knowledge. In this dilemma it was evident that something needed to be done in order to extricate the insane hospitals from their unfortunate predicament by rescuing them from the hands of the politicians, and at the same time infuse new medical life and spirit into the officers comprising the medical staff, by reminding them of their great weakness in thus isolating themselves from the rest of the profession, as well as emphasizing their unusual opportunity for scientific clinical and pathologic psychiatric research which they were wholly neglecting.

Fortunately for us the man and the occasion presented themselves about 8 years ago, and, while this great work of deliverance is still in its early infancy, yet the results so far attained are flattering, while to their honor let it be said the brilliant achievements already accomplished by the rescued medical officers have largely redeemed the former careless indifference into which they had unwittingly fallen. Prior to the able address[1] referred to, which was delivered before the American Psychological Association, May 16, 1894, by Dr. Weir Mitchell of Philadelphia, in which he severely criticised prevailing methods of the officers, as well as the care, management and treatment of the insane, little was actually being done of a truly scientific nature (except in a few notable instances), by those who had charge of the various state insane hospitals, to enlighten the general medical profession concerning the true nature and character of insanity. This bold and fearless address, however, has had the desired effect of arousing the alienist from his lethargic slumber to one of extreme zeal and scientific activity, which has resulted in a continual series of practical demonstrations and discoveries that greatly enlarge our former available useful clinical knowledge concerning the insane, as well as the intricate problems associated with psychopathology and clinical psychiatry.

While it is true that the alienist was first of medical specialists, yet he soon become too exclusive in his methods to be practical, and his willing isolation stunted the growth and development of scientific psychiatry to such an extent that there was complete stagnation in this department of medicine for very many years. Dr. Mitchell's address, however, marks the beginning of a new era in the scientific study of psychiatry in America by defining the line of demarcation between the inactive, unpractical, unscientific methods of the past and those of the more modern, enthusiastic, energetic, scientific, practical ones of the present period. It also demonstrates conclusively the practical trend of modern psychiatry in thus repudiating political intrigue as the dominating controlling power which dictates the medical policy and appointments of our state hospitals, beside refusing politics the right to govern the standard of medical educational worth and fitness for such positions. To live out of range of critical shot and not be preceded and followed through the various wards of the insane hospitals by clever rivals in other departments of medicine, or to refuse advice and even admission to able clinicians working in other medical branches, was not only an ancient vice, but a method of doubtful practical utility which needed condemnation, as it certainly hindered the best growth and development of scientific psychiatry. Under the old régime of keeping aloof from the rest of the medical profession was it any wonder that a few years ago when the alienist was asked for his contributions to medical science that we were handed the latest biennial report of the hospital, which contained but a few fragmentary remarks concerning insanity, and sandwiched among incomprehensible tables of statistics and farm balance sheets, beside many pages devoted to the crying need of a new washing machine, additional buildings or more medical assistants?

That such was the case is a well-known fact (and unfortunately exists even to-day in a few of the more non-progressive state hospitals), but the trend of modern psychiatry contemplates the revolution of such worthless matters by substituting in their stead the inauguration of a practical scheme whereby those called on to fill such positions of trust and honor can demonstrate their fitness by their individual scientific attainments and more willing devotion to the scientific study of psychiatry, thereby placing a premium on their meritorious service. That insanity and its allied disorders can not be separated or divorced from general medicine, but that the intricate problems associated with each are more or less dove-tailed, is self-evident, hence, it is impossible to ignore the close relation that exists between mind and body on the one hand, and general and special medicine on the other. It was not, however, until this intimate relation or bond of union between the two was better understood that the science of psychiatry made any practical tangible advance.

With every step in the forward, progressive march, however, connected with the study of neuropathology, it was evident that those diseases termed mental were dependent on some lesion of the nervous system, hence nervous and mental diseases are closely allied, indeed they are to be regarded as being almost synonymous, so that the study of one depends on the study of the other, and as all parts of the human organism are subject to nervous control or innervation it follows as a logical sequence that the entire human organism is concerned at times in their clinical manifestations. In order, therefore, to be a competent alienist one must of necessity be not only a skilled neurologist, but also an able general medical practitioner. That American alienists have been slow to learn this great lesson is certain, but it is a very hopeful sign of the times and one that also beautifully illustrates the trend of modern psychiatry, when we realize the truth that the American Psychological Association has ultimately decided to affiliate with the Congress of American Physicians and Surgeons by holding their meeting together next week at Washington, D. C. Such an amal-

1. Jour. of Nervous and Mental Diseases, July, 1894.

gamation as this can not fail to accomplish much good to all concerned, as well as prove a valuable scientific impetus to the future study of psychiatry. In thus extricating the insane hospitals from their perilous political position, as well as win back to the common professional ranks this large and useful body of scientific alienists, Dr. Mitchell unconsciously exercised a masterly stroke of medical polity, as well as displayed shrewd strategetic diplomacy which argues well for the future study of psychiatry, beside forcibly illustrating the moddern tendency of scientific exactness in practical psychologic medicine. That we are simply standing at the threshold of a practical working knowledge of insanity heretofore unattained by any previous period, whereby the general medical practitioner can recognize clinically from the varied symptom complex grouping, not only the evidence of diagnosis, but also the more important factor of prognosis, is very certain. This is clearly evident when we contemplate the progress recently made in psychopathology whereby our former conceptions of the acute psychoses have been greatly modified and revised, thus changing completely all former classifications of insanity, and rendering them more or less antiquated and obsolete.

In this advanced step of progressive medical development we see again the trend of modern psychiatry and recognize at once its practical clinical utility in general medical practice.

For centuries it has been the prevailing custom to classify insanity from either its etiologic, symptomologic, pathologic or psychologic standpoint, hence, those of us who learned our psychiatry within the past 15 or 25 years know full well how these earlier views were handed down and taught us, and how they still cling to our memory, thereby molding our forms of thought in classifying the more common types of insanity. It is only within the past ten years, however, that we in America have fully realized their faulty construction and that instead of considering such conditions as melancholia, mania and dementia, as distinct morbid clinical entities as was formerly taught and believed, we are now fully assured by the more advanced and correct views of Kraepelin that these are simply different stages of one and the same underlying pathologic process.

Hence, all former generalized schemes of classification which does not conform to this more correct teaching as demonstrated by modern clinical research and pathologic findings are not only proven to be wholly inaccurate, but utterly futile and misleading.

While these newer conceptions of insanity have been partially understood for some time, more especially in Germany, yet no systematic attempt to enforce their practical teaching in America took place until within the past few years, and at the present time there are but three text-books[2] to my knowledge published by American authors in which these newer and more correct views are set forth, thus embodying their establishment in American scientific medical literature. Without any desire to burden you with evidence of the fallacy of the older teaching by which these three common psychoses were considered distinct and separate clinical entities, it will suffice to remind you that it was very obvious to those who had large opportunity of practical clinical experience that changes in the emotional nature or variations in the states of feeling common to the sufferers of the acute forms of insanity were absolutely of too evanescent a character to be made the basis of any scientific system of classification.

These at best are unreliable guides, and, consequently, misleading, for under such a method any new symptom or group of symptoms in which there was a decided manifest change in the condition of the emotional element would suffice to establish a separate species of insanity. For instance it is clear to those who have had any experience that cases of melancholia often present symptoms of mania and later those of dementia. The conception of these very different mental states represented in the same individual as being distinct morbid entities, has long dominated psychiatric teaching. That this view was based on the changes in the emotional nature of the patient is evident, but such fluctuating states of feeling are now recognized to be altogether too misleading to form the basis of accurate scientific classification, hence Kraepelin's proposition to make the tendency of the underlying disease process, whether toward recovery or dementia, a criterion of the character of the psychoses is certainly helpful. In this form of classification all the elements are included which belong to its cause, symptoms, course, duration and final outcome, and each is given the proper recognition it richly deserves. From this standpoint melancholia and mania are considered due to the same pathologic process, and while we are as yet unable to satisfactorily explain its special pathologic character, the clinical correctness and validity of this position can not successfully be gainsaid. Moreover, clinical observation and experience demonstrates the truth of the assertion that, when this principle is applied to the acute psychoses, one group of cases naturally tends toward recovery, while still another class has a characteristic tendency toward dementia. On this clinical fact depends the future welfare of our patient, hence, in every case of acute psychosis we look from the outset for the prognosis, as in the former case a favorable opinion can safely be ventured, while in the latter case the prognosis is beset with serious misgivings. Thus it will be seen that the trend of modern psychiatry is toward simplification in classification whereby a single species of insanity takes the place of several under the older methods, as well as establishing a new criterion by which the essential tendency of the disease as a whole is recognized and its natural clinical character revealed in the form of either recovery or dementia, which again determines its favorable or unfavorable final outcome, thus establishing a correct rule for prognosis.

Again the trend of modern psychiatry can be seen in the movement whereby the more accurate or recent insane can receive appropriate accommodations and treatment at the various general hospitals of our cities rather than be referred, as they are now, to the state insane hospitals.

In making this statement I trust it will not be understood that I undervalue the service rendered these poor unfortunates by the medical staff of our state institutions —far from it, for I have the very highest regard for them and their work, as well as for the magnificent structures in which they dwell; but as it now stands, scarcely any general hospital will receive for treatment persons suffering from mental derangement. The reason for this is well understood, even though a great injustice is sometimes done by such a rule. In the majority of instances at the present time such general hospitals are not prepared to receive such persons because the very nature of the case requires special quarters and privileges which

2. Brower and Bannister: Practical Manual of Insanity. Reference Handbook. Medical Sciences. 1903. Berkeley on Mental Disease.

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are not now supplied or available. Moreover, the environment of the medical and surgical wards of the average city hospital are not calculated to benefit the recent or more acute forms of the various psychoses, and this is often urged against their admission.

But there are several good scientific reasons why provision for this class of patients should be made in our general city hospitals. Indeed, it is highly desirable that such cases should be admitted, and it is one of the hopeful signs of medical psychiatric progress that such a movement has already been inaugurated. Perhaps the most important reason, and that to which all others would appear subservient, is the fact that in its incipient stage insanity is most curable. Indeed, it is infinitely more curable than typhoid fever, pneumonia or even rheumatism and kidney lesions. The curability of insanity in its incipient stage is so very striking that it appeals to our more serious consideration, and while this truism has been emphasized for centuries we are so very slow in taking advantage of its true significance that I make that my excuse for again urging its recognition and practical importance. How very desirable to receive such persons in the early formative period of the malady, before the more serious complications occur, such as delusions, imperative concepts or phobias, hallucinations, suicide, homicide, or even incoherence. That we are then enabled to study more especially the causes, whether they be toxic or otherwise, and thus gain control or stay the progress of cell disorganization or even remove the conditions which favor their development, is clear to all.

The dilly-dallying process, however, of waiting for further developments, as now commonly practiced on the part of both physician and the friends of the patient, would largely be removed if our city hospitals would receive such persons for treatment. Moreover, this unfortunate disposition to wait often decides the question of prognosis whereby a presumably curable case is rapidly transformed into one of absolute incurability. On inquiry we often find this failure to act promptly depends on one or more of four conditions, viz.: 1. Ignorance of the necessity of providing prompt and appropriate treatment. 2. Fear of the stigma which follows commitment or exposure of family secrets. 3. Failure to recognize that insanity implies irresponsibility and that suicidal complications develop early. 4. Lack of funds to defray the necessary expense involved in the treatment. All these elements cause the parties interested to hesitate before taking the necessary steps to provide suitable and appropriate treatment. If the general city hospitals would make special provision by adopting a psychopathic department for such patients and receive them at a moderate financial rate or even on the same basis as other patients are now admitted, the prevailing objections would speedily disappear and it would become as common to refer the insane to such hospitals for treatment as it is now those suffering from typhoid or pneumonia.

The special advantage of such an arrangement would certainly tend to increase the percentage of recoveries, which is always so highly desirable and which constitutes the true aim and object of practical scientific psychiatry. The more accurate systems of classification that are now enforced render finer discriminations in diagnosis possible, which again improve our methods of treatment. Hence the trend of modern psychiatry is toward greater individualized care of the insane. This is greatly aided by the more correct and improved methods of examination, which again depend on the more strictly scientific laboratory processes and modern mechanical appliances, all of which tend to enlarge our practical, clinical and therapeutical resources. In conclusion, it is my conviction that psychiatry has yet a great work before it, as well as a rich field for conquest in separating the various fads and frauds of the day and substituting in their stead scientific medical truth as revealed in the practical observation and experience concerning the demonstrated facts which pertain to mental influence and placing them on a practical scientific basis. That nervous and mental diseases are not always amenable to either pharmacology or surgery is very certain, but that they are powerfully influenced for good or ill by mental and moral means, as well as by the nature of their environments, is a statement in accord not only with our best knowledge, but also with our experience and judgment. That these psychologic means and measures powerfully affect the results obtained in their treatment is also very clear to every thoughtful physician, but that their specific nature as well as methods of application are not as well understood by the profession as they should be is also true. It would, therefore, seem within the legitimate province of the science of psychiatry to rid mental therapeutics of their empiric value by practical demonstrations and by the teaching of the genuine, thus differentiating the true from the false by appropriate, practical methods, and recognizing their special virtue by placing them on a scientific, ethical basis. To sum up, it would appear that the general trend of modern psychiatry is toward more strict accuracy in classification and diagnosis of mental disorders by the practical utility of all the recognized modern means and methods known to medical science. These again establish a more correct rule for prognosis, besides suggesting a plan of treatment to be adopted for their relief, all of which, when duly applied by the general medical practitioner, will not only aid him in the differentiation of the various psychoses and allied disorders, but will also furnish him the secret to their more successful care, management and treatment, which, after all, is the true aim and object of all practical medical science.

DISCUSSION.

DR. F. SAVARY PEARCE, Philadelphia.—I think we all agree that to send certain cases of acute insanity to the general hospital instead of to the insane asylum is not only practicable, but highly desirable. We know that certain cases of acute insanity will recover, and if such patients could be sent to a general hospital their recovery could be hastened, and they would be spared the stigma of having been inmates of an insane asylum. A special ward should be set aside for these patients in the general hospital; otherwise the general medical men connected with the institution will surely find legitimate reasons for objecting to the presence of this class of cases in the hospital. In the institution with which I am connected I hope in the near future to see a special ward set aside, as far distant from the ordinary wards as possible, where cases of acute insanity can be treated. Another point is that the members of the patient's family are often the very ones who insist that he be sent to an asylum. The physician must educate the public to the fact that insanity is not infrequently a curable disease. We know that a great many of the incipient cases of insanity, and even some of the chronic cases, recover. According to Dr. Richardson, of the Norristown Asylum, 60 per cent. of the cases admitted to the asylum recover. I am convinced that the treatment of the insane must be revised very thoroughly. If the public could be made to appreciate the fact that patients suffering from insanity recover as frequently as do those suffering from many other diseases, I am sure that they would give us their cooperation in the establishment of special wards for the insane.

in the general hospitals. This would also rid insanity of much of the mystery that now surrounds it.

DR. DANIEL R. BROWER, Chicago—It is not very long since I suggested the establishment of psychopathic wards in general hospitals. Since then, great progress has been made toward the realization of this project, and one of the most hopeful signs, as Dr. Punton has told you, is the amalgamation of the American Psychological Association with the Congress of Physicians and Surgeons. But this object is not always attainable. The maintenance of such a special ward is a very expensive affair. Since I gave up the medical superintendency of a hospital for the insane, I have been engaged continuously in the treatment of acute cases of insanity in a general hospital, and I think I have had a fair measure of success, sufficient, at least, to induce me to continue. Of course, cases that are treated in these general hospitals must be selected with care, and if that is done, a considerable number of them can be safely admitted. I wish to emphasize the point that it is possible, in well-selected cases of acute insanity, to get satisfactory results in the general hospitals.

DR. R. HARVEY COOK, Oxford, Ohio—In arguing for the admission of the acute insane into a ward of a general hospital, instead of a hospital for the insane, you imply either that the acute case can be better cared for in the general hospital, or you are endeavoring to prevent the stigma of insanity. If the acute case can receive better care, so can the more prolonged case. It then makes it imperative to convert our hospitals for the insane into general hospitals for humanity's sake. If, on the other hand, it be to avoid the stigma, how grossly unjust to the less acute case. Would it not be far better to place all insane cases in a hospital for the insane where proper classification can be had? Educate the people, let them know and feel that insanity is of no more disgrace than typhoid, thus removing in a short time the so-called stigma.

DR. J. H. MCBRIDE, Los Angeles, Cal.—I think we are all gratified to note that a change has taken place in recent years in the treatment of the insane, and that more attention is paid to-day to general medicine in the insane asylums than ever before. In regard to the curability of insanity, I can hardly agree with Dr. Punton. I think his proportion of recoveries is too large. My own experience is essentially summarized in the statement of a French alienist, whose name I forget. He said that of ten insane persons, five would recover from the first attack, and five would not recover. Of the five who recovered, two, certainly, and probably three, would relapse; the other two, or possibly three, would remain well. This leaves a probable recovery rate of 20 or 30 per cent.

DR. RICHARD DEWEY, Wauwatosa, Wis.—What impresses me most in regard to this whole subject is the difficulty of drawing definite lines, and the danger in making sweeping assertions. Insanity is so complex a condition that it is scarcely possible to generalize. There is a large number of persons who are insane in the ordinary sense of the term, and who, nevertheless, can be treated in the general hospital; then there are other cases for whom that plan is entirely inadmissible. We must ascertain whether the form of insanity is associated with dangerous or disagreeable elements before we can decide whether a certain patient can be treated in a general institution. Some insane patients are noisy; others have suicidal or other dangerous tendencies, and for all such special provision must be made. I do not doubt the desirability of treating certain cases of acute insanity in the general hospital, but the cases must be carefully selected and suitable provision must be made for them in the way of isolated rooms. I believe that this question will eventually work itself out if each of us not only will do the best he can with cases that come to him, but also especially make an effort to enlighten the general profession and the community. This class of patients also requires freedom in coming and going under suitable regulation. They should spend much of their time out of doors, especially in the pleasant season of the year, and the city streets are not good places for insane patients. Institutions where they are cared for should be surrounded by grounds where these patients can get plenty of outdoor exercise. I greatly appreciate the fact that the subject of insanity does not occupy the isolated position it formerly held, and that this disease is now being studied very much in the same manner as are other diseases.

DR. ALBERT E. STERNE, Indianapolis—For many years I held the view that so-called observation or reception hospitals would be very desirable in connection with the treatment of the acutely insane. In experiments that have been made in that direction, however, as wards in connection with general hospitals, it has been found that in the vast majority of those cases it became necessary to send them to an insane asylum after a comparatively short period of time. No alienist can foresee, in any given case, even of the mildest type, what the duration of the psychosis will be. He may in certain instances approximate its duration, but it is a rather common experience that the very worst cases of the acute variety of insanity, sometimes with the most unpromising outlook at the beginning, both as regards their personal aspect and the family history, may improve within a few weeks or even days, especially where the digestive element is a prominent one. Then, again, we have the experience that in the acute, seemingly mild cases, which we would prefer to send to the general hospital, the symptoms may steadily grow worse, and the patients may take weeks, months or even years to recover. No general hospital could possibly take care of these cases for any great length of time. It is unfortunate that a few insane must suffer with the general mass of the insane. It is unfortunate that a comparatively small percentage of persons who were insane for brief periods should have such a stigma placed on them. They could no doubt have been treated just as well, or even better, in a general hospital or at home. The Scotch plan of treating insane patients by the colonization method, which affords them plenty of freedom and out-of-door exercise, has proved to be excellent, but for the ordinary run of cases it would be found impracticable. The establishment of a detention hospital, separate from the main asylum, would be better. The fact has already been brought out that relapses are not uncommon among these acute cases. According to one of the German authorities, a vast majority of the cases of mania and melancholia suffer from relapses, and even in the interim it is a question whether they are entirely free from the disease. While I am an advocate of the detention hospital, I should not be in favor of separate wards for the acutely insane in the general hospital. I think such a measure would prove inimical to the majority of the patients in such an institution, and even, in the end, to the insane patients themselves.

DR. WILLIAM J. HERDMAN, Ann Arbor, Mich.—At the time Dr. Weir Mitchell made his strictures on the medical management of the insane asylums, I think he scarcely did justice to what was being done. In those years, the officials of many of the insane asylums were greatly handicapped by conditions under which they were doing some very good work. I know this was true in the Michigan asylums, and I was very familiar with them at that time. As we progress into a new field, we must go largely along the skirmish line, and do a great deal of individual work. In doing this, a man may not always be fully understood by his fellows. We have passed beyond that skirmish line now, and the main column is moving on. We are forming a line of battle, and each one is doing his part in clearing the field. I think the alienist has done his part, and done it well. I believe that the humane management of the insane has been developed to a degree that it could not have been developed by any other method. The time has now come for a change. That such a necessity is present, we all recognize, and with that portion of Dr. Punton's paper I am fully in accord. There is greater harmony between the alienist and neurologist, and this is as it should be. I believe that there is an opportunity for us to do most excellent work in dealing with acute cases of insanity in the general hospital. The percentage of such cases, however, is not very large; certainly not beyond 20, and I doubt if it would reach that. The number would be limited largely to cases of incipient insanity, associated with disorders of the

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eye or ear, or of the genital organs or gastro-intestinal tract. Such factors not infrequently act as the last straw in overturning a weakened brain from a condition of sanity to insanity, and it is in that class of cases that treatment in the general hospital would be most desirable. Another factor to be contended with is the family of the insane patient. Many families refuse to allow their relative to be immediately sent to an insane asylum, whereas if such a patient could be sent to a general hospital, the consent of the family could be readily obtained. In these cases of acute insanity, prompt treatment is the most important element. In connection with this subject I recently made a suggestion which I think would cover the ground very well. In every state we have a number of well-equipped insane asylums, each one covering a certain district. For example, in Michigan we have four such asylums. Why would it not be feasible to establish in each of these districts subsidiary establishments, under the charge of a competent trained nurse? These dispensaries, if you would so term them, could be established in a private house, or in connection with private sanitariums, and the patient could be kept there until the superintendent of the asylum in that section of the state could be notified. Then the latter or his assistant could go and investigate the case, in consultation with the physician who had charge of the patient. Then, if the case seems to be a suitable one for the general hospital, let it be sent there; if not, it can be sent to one of the asylums. It seems to me that such a plan would prove both feasible and satisfactory. In many of these districts there are alienists who could arrange the details regarding a temporary residence for these patients.

DR. G. W. MCCASKEY, Fort Wayne, Ind.—In Fort Wayne we have two fairly well-equipped rather small general hospitals, and our experience there with the treatment of cases of acute insanity has not been satisfactory. Some one in this discussion has said that 20 per cent. of the cases of acute insanity will be manageable in a general hospital. In my experience, it is even less than that. Furthermore, we can not foresee which of the cases belong to the 20 per cent. In one of our hospitals we have an entire floor, so far removed as possible from the other patients, reserved for the insane, and our experience has been such that I do not regard the plan as desirable.

DR. JOHN PUNTON—I think Dr. Weir Mitchell is entitled to much credit in being the originator of this modern method in reference to the better treatment of the insane. I agree with Dr. Dewey that every case of acute insanity is a law to itself, and it is almost impossible for any alienist to tell exactly what can be done for any case in the incipient stage. In reply to Dr. McCaskey, in my paper, I did not have in mind those cases that require bars to hold them, or those with suicidal tendencies. The ones I had in mind for general hospitals are the borderline cases.

ARTHRITIS DEFORMANS.

THE REPORT OF A SERIES OF ONE HUNDRED AND TEN CASES FROM THE JOHNS HOPKINS HOSPITAL.

(FROM THE CLINIC OF PROFESSOR OSLER.)

THOMAS McCRAE, M.D., M.R.C.P. (Lond.)

THE JOHNS HOPKINS HOSPITAL.

BALTIMORE.

(*Concluded from page 96.*)

GROUP IV. SPONDYLITIS.

As already said, the cases with spinal involvement fall into two groups, one with general, the other with local involvement. The former is readily diagnosed, the latter is certainly much more easily overlooked. These cases are usually considered to belong to the "osteo-arthritic" group. The bony changes predominate, and especially new formation of bone. Certain writers hold that the osteoarthritic cases are quite distinct from the type previously spoken of as "rheumatoid" or those in which other than bony parts are especially involved. In certain of the cases of this series there seems no doubt of the *occurrence of both types in the same patient.* If this be true it goes far to prove that all the cases here grouped under the heading of arthritis deformans do belong to one disease which has various types. Not only were the two types of arthritis found in the one patient, but in some of those showing only osteoarthritic manifestations there was a history of attacks of acute polyarthritis exactly like those described under Group II, and from which the patient had recovered apparently completely. The histories are so characteristic that there seems little doubt of the nature of the old attacks.

There were 22 cases showing spinal involvement. In 13 of these there was spondylitis alone, while in 9 this was accompanied by symptoms in other joints; in other words, the lesions were of the polyarticular type, and these have been included in the analysis of Group II. In taking up the study of this group it is sometimes difficult to distinguish the symptoms from the spine and those from the other joints. In reference to the extent of spine involvement the cases were as follows:

	Gen. inv. of spine	Local inv. of sp.
Spine only involved[8]	6	7
Spine and other joints	9	0

It is worthy of note that when the spinal involvement was associated with changes in other joints in no instance did we recognize involvement of a portion of the spine only. But, as said before, the confession is frankly made that only recently have we learned to diagnose the local form, and it is quite possible that instances of it have been overlooked. For the same reason the relative figures of these groups mean little as to their comparative frequency.

Incidence.—Of the 22 cases, 20 were males and 2 females. The striking preponderance of males is to be noted, especially as the other type is thought usually to occur much more frequently among females. All are white. The ages were as follows:

1 to 10	0	41 to 50	2
11 to 20	1	51 to 60	2
21 to 30	6	61 to 70	2
31 to 40	9		

Complaint.—This, in the majority, was of pain and stiffness in the back and legs. With this mention was often made of the crippling and general weakness. A few laid especial emphasis on the pain.

Onset.—The age of this was:

1 to 10	2	41 to 50	1
11 to 20	10	51 to 60	2
21 to 30	4	61 to 70	1
31 to 40	2		

Only 7 cases were admitted below the age of 30 years, but in 16 the onset was before 30. The onset in a few over the age of 50 is to be noted. The early age at onset in so many of the cases is striking.

The onset in the 13 spinal cases was gradual in 11 and sudden in 1, with one doubtful. In two of these there was a history of previous acute attacks of polyarthritis which subsided and left apparently no damage. These are exceedingly interesting. One may be noted briefly:

No. 61.—J. H., white, male, aged 45, was admitted complaining of stiffness of the back. There was a history of arthritis deformans in his family. From childhood he had at times some arthritis. With these attacks he was usually laid up, but never for very long. At 28 he had his first severe attack. This involved many joints and he was two months in bed. He recovered gradually and was well for seven years, when he had another attack with many joints involved, and the neck slightly. Three years and five years later there were subsequent attacks, in the last one his

8. To prevent confusion it is convenient to refer to these two classes as the "spinal" and "mixed" cases.

spine becoming stiff. On examination the joint changes were practically confined to the spine and hips.

In other cases there seemed little doubt of previous attacks of local spondylitis, from which they recovered completely, and were practically well for many years. There were seven with very suggestive histories of these previous attacks with apparent recovery at any rate from symptoms. These intervening periods varied from two to eighteen years. One can not help wondering if in some of these cases it is only some accidental occurrence—such as an attack of influenza—which determined another attack. If this be true it may be that many cases may recover at any rate from ordinary symptoms of the disease.

General Features of the Spondylitis Cases.—These are most characteristic in the cases of general involvement. The spine is fixed and the term "poker-back" is most expressive. In some the head is held forward and there is marked bowing of the upper spine, and all rotation in the cervical region is lost. The patient to look about has to move the whole body. There is much difficulty in stooping, and on an attempt to pick an object from the floor they have to crouch down without any bending of the spine. On examination, the natural curves of the spine are often lost and the bowing of the upper dorsal and cervical regions is at times marked.

In the type with local involvement the picture is not so striking. The area involved is usually the lower dorsal and lumbar regions. The patient may make complaint of the back—commonly of pain and stiffness, which he may refer to the spine or dorsal muscles—or very often, of pain in the legs. This latter is common, especially over the course of the sciatic nerve, and there is little doubt that many of the cases regarded as sciatica are really arthritis deformans of the lower spine. Too often the diagnosis of neurasthenia is made, and perhaps also lumbago—whatever that term may mean. These cases on ordinary examination show nothing. It is only on the attempt to have them do certain movements that the rigidity of the spine becomes evident. This can be demonstrated by having the patient stand with the feet together. The back should be visible. Then with the hips held, to prevent movement, the patient is asked to bend forward, backward and to the side. The restriction of free movement at once becomes evident, and it may be further shown by asking him to pick up an object from the floor. The marked interference with free movement between the vertebræ is very evident.

Certain curious features occur in some of the cases. There may be some alteration in the natural curves of the spine. Lateral curvature may be present. The upper part may be bowed with the convexity backward and the head held far forward. There may be marked prominence at the junction of the cervical and dorsal regions (1 case), or the lumbar curve may have disappeared (4 cases). There may be one prominent lumbar spine (1 case). The neck may only be partly ankylosed. Bony thickening may sometimes be felt about the neck vertebræ (2 cases). In 1 case the neck was rigidly fixed to one side. Occasionally the back muscles—especially in the lumbar region—may be very rigid or they may show wasting.

In some instances the hip joints are involved and there is restriction of movement there. In others, the symptoms are all referred to one leg, and the patient may systematically "save" it, and so usually walk on the toe or with the knee slightly flexed. Such cases are often mistaken for tuberculous hip disease. Some of these patients may limp very markedly.

Emaciation.—This is often marked, and was especially so in our group of mixed cases. With this there may be marked pallor, although this is usually more marked than the actual anemia. The local wasting is often very extensive. The muscles of the back, but especially those of the buttocks and legs, suffer. This does not seem to be always symmetrical. One side of the spine at times may be more involved, and the wasting be greater also on that side.

Reflexes.—These are usually increased in the legs, both the knee jerks and the tendo Achillis reflex. With this increase in the legs, the arm reflexes in the local spinal cases are usually normal. In only one case was a diminished knee jerk noted. The cremasteric reflex was increased in 2 cases and an ankle clonus was obtained once. In 1 case with signs more on one side the reflexes, including the cremasteric, were all increased on this side and normal on the other.

Temperature.—Of the 13 spinal cases in 4 this was normal, in 5 it averaged 99 F., and in 2 it varied from 99 F. to 100 F. Of the mixed cases 3 had a normal temperature; these averaged 99 F.; 2 varied from 99 to 100 F.

Pulse.—In the spinal cases, 5 were normal (70 to 80 F.), 4 were between 80 and 90 F., and 3 between 90 and 100 F.

Blood.—In the spinal cases there are counts in 4 with an average hemoglobin percentage of 76; red cells, 5,205,000, and leucocytes, 7,800. The leucocyte count was over 10,000 in only one instance (11,300). In 4 mixed cases the averages were: Hemoglobin, 69 per cent.; red cells, 4,980,000, and leucocytes, 6,300. These findings are practically negative. The differential counts were normal also in both forms.

Tuberculin.—This was given in all the spinal cases and always with a negative result. It is a great help in the matter of diagnosis.

Radiographs.—These show a very characteristic condition. In all but probably the very early cases, definite deposits of new bone can be made out.

PATHOLOGY.

In this osteoarthritic group we have usually a marked overgrowth of bone. There is proliferation of the articular cartilage and later ossification of these outgrowths. Certain other structures may also be involved in the bony change, such as the ligaments or fibrous tissue. These bony structures usually show little alteration in their histologic structure from ordinary bone. There is marked hypertrophy of bone in contradistinction to the type previously described where atrophy predominates.

In the spine the process frequently begins on the anterior aspects of the bodies of the vertebræ and extends along the ligaments. With this there is deposit of new bone. This may mean a more or less continuous bridge of bone, and in the radiographs of such cases the bony deposits can readily be seen between the bodies of the vertebræ. These may be on one or both sides, but in early stages are often unilateral. The subsequent course is very variable. The process may advance only slightly and there be comparatively little change. If the process be very active the intervertebral cartilages may be replaced by bone before any absorption occurs. In such cases we have the typical "poker-spine," simply one continuous bony column. Should there be gradual atrophy of the cartilages without replacement by bone, gradual curvature will result. This is seen very markedly at

times in old men, who make little complaint of any symptoms. Should such a process occur more on one side we get a lateral curvature. All these various processes may occur throughout the whole spine or be limited to certain regions, most often the lower dorsal and lumbar.

These changes may also occur in the posterior portions of the vertebræ and the lateral or spinous processes be involved. The articulations may be involved both between the vertebræ themselves and with the ribs. This latter gives an interesting condition, namely, almost complete absence of any movement of the ribs and a practical loss of all costal breathing. This was very marked in some of the cases of this series. There may even be severe pain complained of—in the acute stages—when the patient tries to take a long breath, as was well instanced in one of our cases. Should the formation of bone encroach on the foramina it is readily seen why pain referred to the distribution of the nerves passing through them is so common. This, too, may be on one side only, with unilateral involvement.

It is readily seen from the lesions why the symptoms are so varied. The stiffness is, of course, due to the local conditions. Pain may be in the back itself, but is very frequently referred to the areas of distribution of the nerves involved.

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DIAGNOSIS.

As in the acute polyarticular form, the knowledge of the condition is an essential to its recognition. The cases of general involvement are so characteristic that a glance is usually enough to give the diagnosis. There is no need to dwell on them. But with the local forms the story is different. We have long been blind to what was before our eyes very frequently. To Dr. Goldthwait[9] of Boston much of the credit of drawing attention in this country to these conditions is due.

The symptoms complained of most commonly are stiffness, interference with motion, pain and muscular weakness. It may be that many of the indefinite pains complained of in the back, especially in the morning on waking, are due to this condition. Lumbago, while probably rheumatic or gouty in some, is perhaps at times due to this. Many of the cases of so-called "sciatica" are caused by arthritis of the spine, and also instances of obscure pains in the legs and about the body.

There is no intention of suggesting that every case of pain in the back or of sciatica is due to spondylitis, but it is suggested that in every such case it is most important to examine the back. Some cases otherwise regarded as neurasthenia with complaint of pain in the back (which is, unfortunately, only too common a combination), will be found to have local arthritis of the spine. Patients complaining of sciatica may have the same condition.

Of the methods of diagnosis first comes the examination of the spine. The patient should be completely stripped, or down to the hips at least. In the majority of cases little is to be made out. There may be some curvature, or a projecting spine, or more commonly an obliteration of the lumbar curve. There may be wasting of the dorsal muscles, or in the gluteal region, or of one or both legs. In some the attitude is suggestive. They stand with one leg a little flexed and "favor" that side. These results may be only suggestive. Next comes the investigation of the mobility of the spine. With the legs straight, the patient is asked to bend forward and touch the floor, bend back and to each side. Any limitation of motion is very readily recognized. This may be equally marked in all directions, or only in one, although usually at least two are combined. He may bend forward but a very short distance and to one side much less than the other, or lateral movement to one side only may be much restricted. These variations are very readily understood in view of the pathologic anatomy. These movements may cause pain, either local or referred. An attempt to bend to the right may cause the same pain in the leg of which the patient complains. The attitude on attempting to pick up an object on the floor is often characteristic. With this the sensation should be tested; areas of altered conditions are important. The reflexes are usually increased.

The diagnosis may be fairly clear from this examination, but there are two important aids, namely, tuberculin and the *x*-ray picture. The use of tuberculin excludes the most common source of difficulty, although tuberculous disease of the spine rarely gives the same disease picture as spondylitis. In some instances there is marked involvement of the hip joints with the spondylitis, and this may have led to a suspicion of tuberculous hip-joint disease. The radiograph, if it shows anything, is usually characteristic. The deposits of bone usually appear as shadows between the bodies of the vertebræ. In early cases, of course, little may be seen, and in very fat patients it may be difficult to get a clear plate.

Should the diagnosis not be certain with any of these methods, one help remains—the therapeutic test. Put a light plaster jacket on the patient, which should extend from the axillæ to the level of the trochanter, and if there be spondylitis there should be marked improvement in the symptoms in a few days. This is especially useful in the cases with sciatica.

TREATMENT.

As in the other type, attention should be given to the general nutrition. The same rules for the care of the general health, fresh air, sunlight, nutritious diet and tonics (the syrup of the iodid of iron, arsenic, cod-liver oil, etc.), should be carried out. With these, massage, bathing, hot air and baking to a limited extent, may all be used. Locally, the great object to be attained is rest. This can not be done by keeping the patient in bed, unless the back be well supported, and this is difficult to accomplish properly. Some kind of jacket is more suitable. Perhaps the best plan is to put on a plaster jacket for two to four weeks, and then a strong enough leather one to serve the purpose. With the parts at rest, the pain lessens and the muscular irritability diminishes. In the cases with much curvature the muscular contraction is often largely responsible, and a month with the jacket may almost completely correct this. The jacket should be put on with the patient standing as straight as possible, but no force should be used. If there be deformity, the jacket will often gradually correct this, and a second one can be put on in two weeks. The jacket or support should be worn until the process is at a standstill, and later some lighter apparatus may be substituted. In such cases, after the condition is improved, every care should be taken to keep the general health as good as possible to lessen the chances of subsequent attacks.

In the cases with general involvement the damage is done. Some form of light jacket may give relief, but the general health is the most important thing we can influence.

9. Boston Med. and Surg. Jour., vol. cxli, 1899, and vol. cxlvi, 1902.

The early diagnosis is the most important consideration in treatment. But in the prognosis one has to keep in mind that the disease may advance steadily despite all treatment, and that the most that can be done is palliative.

CONCLUSIONS.

The points to which special attention is directed are:

1. The frequency of the occurrence of acute polyarthritis in arthritis deformans and the danger of mistaking this for acute rheumatism.

2. The importance of the recognition of the spinal forms of the disease, especially the local involvement.

3. That in arthritis deformans we have an obscure disease of considerable frequency worthy of study, especially from the etiologic aspect.

DISCUSSION.

DR. JAMES J. WALSH, New York—There is nothing more used to give lasting reputation to quacks than the treatment of chronic rheumatism. If the disease be examined very carefully it really resolves itself into a series of affections not rheumatic at all, nor does it have any relationship to articular rheumatism. The latter runs a definite course and is cured completely and no marks are left in the joints at all. Rheumatic arthritis considered as an acute disorder which leaves marks in the joints, is quite another affair. The term "rheumatism" is likely to cover many mistakes in diagnosis, and many errors and negligences. There are three things that are mentioned in the newspapers, catarrh, rheumatism and gout, and curiously enough the three words mean exactly the same thing; etymologically, they mean "to flow," or "to have excessive secretion." Few recognise the fact that acute rheumatism never becomes chronic rheumatism. Rheumatoid arthritis is another disease especially in this country, and is not affected by the remedies commonly used in the treatment of rheumatism. It is to be hoped that in the beginning of the twentieth century something will be done to clear up the large group of cases called "chronic rheumatism" and bring a little order out of chaos. The word rheumatism has been abused to an enormous extent, and so long as practitioners are satisfied with this for diagnosis, rational therapeutics is impossible.

DR. J. T. MOORE, Galveston, Texas—During the past four or five years that I have been connected with the department of medicine in the University of Texas, I have been looking for just such cases as Dr. McCrae has reported to us. Two years prior to this I was demonstrating anatomy, and since then I have tried to keep up my connection with the department of anatomy. We have been astonished at the large number of cases we have had in the dissecting room with this disease, the changes occurring in the joints, and yet not recognized prior to death. Some of these cases were diagnosed as chronic articular rheumatism, and some were not diagnosed as rheumatism at all; yet we found various changes in the joints when they were examined in the dissecting room. As physicians we should enter more on the investigation of this disease. It is evident that most of these cases are not due to chronic rheumatism, although so often diagnosed as such, but to arthritis deformans. I know of one case in particular suffering from intense pains in the legs. I told the man that he had sciatica; then I afterward told him he probably had chronic rheumatism; but there is little doubt in my mind that if he were brought to the postmortem table some changes might be made out in the vertebræ, showing it to be arthritis deformans.

DR. C. E. SKINNER, New Haven, Conn.—The victims of arthritis deformans are numerous enough and miserable enough to justify a demand on their part that we put ourselves in a position to do something for their relief, and a correct and early diagnosis is the first and most important step in this direction. The majority of physicians confound this disease with others of an entirely different nature, prominent among which may be mentioned rheumatism, neuritis and gout. Rheumatism is comparatively easy to cure under modern therapeutic methods, neuritis is considerably more resistant than rheumatism, and arthritis deformans presents a very difficult problem under any conditions, and especially so when a correct diagnosis and the inauguration of a proper line of treatment have been delayed long enough for profound pathologic changes to have taken place in the joint structures. The condition of some of these victims of failure to recognize the ailment early is pitiable, indeed, from extensive ankylosis of the large joints, which condition complicates the therapeutic problem to a marked and sometimes totally unmanageable degree. The importance of correct and early diagnosis, moreover, is well brought out by Dr. McCrae when he says that arthritis deformans is usually made worse by antirheumatic or antineuritic therapeusis. This has also been my experience. I know that it is almost, if not quite, impossible to differentiate some cases of arthritis deformans in the early stages from acute articular rheumatism, but in the majority familiarity with the clinical aspects of the subject and a proper degree of care and thoroughness in the study of the individual case will render possible a positive determination as to the nature of the pathology present. Then an appropriate line of treatment can be adopted at once and the patient will be saved from much future misery. More work should be devoted to the diagnosis of this disease, and when this is generally appreciated it will be better for our patients, and they will have less just cause for complaint.

DR. THOMAS MCCRAE, Baltimore—There are many aspects of the disease, and there were only two or three that I hoped to emphasize in my paper. I said nothing regarding the etiology; that is a doubtful matter, although the evidence, to my mind, points toward infection with one specific organism or several. The nervous symptoms may be explained by the fact that they are largely due to toxins.

With regard to early diagnosis, the importance of that is very great, and may give us the possibility of preventing later changes.

In regard to the treatment there are certain general principles which should be considered in both types of the disease. Good nutrition, sunlight, fresh air, and good food are essential. Patients who have not obtained those will be more likely to have subsequent attacks. The syrup of the iodid of iron is good, given alone or alternating with arsenic. This should be continued not for months but for years. Massage is usually helpful. Baths are of doubtful utility in many cases. When we consider the local treatment we should think of the two groups. In the osteo-arthritic form rest is very essential, but in the rheumatoid group exercise is essential. In the spinal cases the patients should be placed at rest for a time. In the rheumatoid cases if the patients are kept in bed there may be contractures, muscular atrophy and the joint changes may progress. In the treatment of such cases two things are very essential, viz., patience and perseverance, both in the patient and in the physician.

Malpractice Defined.—A physician or surgeon is liable to be sued for malpractice in treating a patient: 1. When he does not possess ordinary skill, science, and information; or, 2, when he does not use reasonable and ordinary care and diligence in applying his knowledge and exercising his skill; or, 3, when he does not use a reasonable and ordinary degree of skill and knowledge in treating the patient; or, 4, when he does not exercise ordinary care and diligence in attending and treating the patient; or 5, when he fails to give proper instructions to the patient as to the care of himself; or, 6, when he fails to use ordinary care and diligence in determining the frequency of his visits and the cessation of the same; or, 7, when he fails to follow the established modes of practice of his particular school and the advancement in it, and injury results to the patient. And all this whether or not he is to receive compensation.—*Medicolegal Bulletin.*

THE NECESSITY FOR MEDICAL TRUSTEESHIP AND FOR A CENTRAL LABORATORY IN STATE MEDICAL INSTITUTIONS.*

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The contact between the medical profession and the state medical institutions is not close enough. This is true everywhere in the United States. It is particularly true in Ohio. Among the thirty-five trustees governing the eight principal state hospitals in Ohio there are at present but three medical men as members of the boards. To be sure, the medical profession has a representative as local executive head of these hospitals and a number of medical men are employed in the capacity of assistant physicians. But in the real governing body, the one vested with final authority in all important matters, physicians are conspicuous by their absence. Such a condition is bad both for our profession and for the state institutions. The medical profession has much to gain from the proper administration of the state hospitals, and particularly in so far as it concerns the use of the vast material of these hospitals for the advancement of medical knowledge. The state hospitals are much in need of the support that would be afforded by active, broad-minded medical representation on the boards of trustees, for it is a fact generally conceded that the strictly medical work, and particularly the scientific work in these institutions, is far below what it should be.

As concerns the individual institutions, this state of affairs could be remedied by placing on each managing board at least one progressive medical man who could educate his fellow-trustees to the needs of the institution, and who, with his colleagues on the board, could secure the respectful attention of the state authorities and of the legislature. It would be needful, of course, to have in each institution an executive head who would be in warm sympathy with the ideas of medical improvement, and who would work in conjunction with the medical trustee.

It seems to me that a great and powerful organization that is working for the most unselfish of purposes—the advancement of human knowledge and the alleviation of human suffering—such as our medical profession is getting to be, should assert its right to participate in the management of the immense state medical institutions which are, after all, but creatures of our profession, and which each and all contain a vast storehouse of knowledge, for the most part now uncultivated. Our profession should declare in unmistakable terms that mere questions of shelter, food, and raiment are not the most important considerations in the conduct of these institutions; they should be, in reality, more than great state-endowed hotels for the insane and epileptic. Our obligations to humanity demand that as scientific medical men we should enter these hospitals and use their material for study, the aim of which should be the solving of the problems that surround the causation, prevention and treatment, not alone of insanity and epilepsy, but of other diseases such as are invariably found among an assemblage of eight thousand ailing human beings like those now filling the Ohio state hospitals. I predict that success would attend the effort were the now well-organized Ohio State Medical Association to make a formal request for medical representation on the governing boards of the state medical institutions, and I believe it would be possible for the association to secure favorable attention to the candidates whom it might, because of their peculiar qualifications, suggest for these positions.

By bringing into each individual institution a new impetus for scientific work through the efforts of an active medical trustee, much good could be accomplished. Funds could readily be found for a better equipment for medical, surgical and scientific work, and a high grade of physicians could be attracted to the service of the state. By this means a more intimate touch between the medical profession and the state institutions could be secured.

There is another plan that will bring the medical profession of the state at large in sympathetic relationship with the state hospitals, and that is by the establishment of a central pathologic institute as part of the state hospitals' system. The idea is certainly not original, for in the first place at least one state, New York, has already established and placed in successful operation a central pathologic institute; and the project is under way in Michigan, and is being actively discussed in Iowa and elsewhere. But there is a phase of the plan outlined for our state which is unique, and I believe important, and that is the one which proposes that the initiative in the movement looking to the establishment of a central laboratory be taken by the Ohio State Medical Association and that the preponderance of power in the management of its affairs be left in the hands of representatives from the association. To a considerable extent this would make the central laboratory a creature of the state association and the active interest of the medical profession would be retained.

In order further to make the central laboratory of the state medical institutions beneficial to the profession as a whole, it has been suggested that the collection of gross pathologic specimens which naturally would soon be assembled be held open to the profession of the state to become the pathologic exhibit of the state association. Further it would be desirable to have tables in the institute reserved for the use of members of the state association properly qualified to prosecute original research along such lines as would come within the scope of a pathologic institute.

Most of the members of the Ninth Councilor District assembled here to-day are doubtless aware that the project of a state pathologic institute was indorsed by the Ohio State Medical Association at its last annual meeting; that resolutions commending the plan were adopted, and a committee appointed to forward the movement. It was planned to bring the project to the attention of the general assembly which soon convenes. As a member of the Committee on the State Pathologic Institute I am prepared to say that plans have been formulated for an active campaign during the coming session of the legislature. The committee, however, needs the hearty support of every member of the association who can reach a state legislator, and I bespeak the active co-operation of the members of the Ninth Councilor District in our propaganda.

Given a laboratory located in Columbus, sheltered from political interference by the Ohio State University, drawing its material from the several state medical institutions in Columbus and from those scattered throughout the state, properly equipped and judiciously directed, the medical profession of Ohio would have a product to

* Address before the first meeting of the Ninth Councilor District Medical Society, Jackson, Ohio.

which it could point with pride, and the state an addition to its medical institutions whose benefits would ultimately reach all its citizens.

A PLEA FOR UNIFICATION AND UNIFORM ORGANIZATION.

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BOWLING GREEN, KY.

To the Medical Profession of the State of New York:

After correspondence on the subject with members of the Joint Conference Committee and others, more especially on the society side, I have been requested, as chairman of the committee which has had this work in charge from its inception, to prepare for publication an explanation of the plan of organization for state and county societies which has been so generally adopted in the last two or three years. As the plan was prepared and is recommended for universal adoption, is already in satisfactory operation in 32 states and in over 1,500 counties, and is likely to be adopted in nearly all of the other states as soon as their annual meetings occur, as the subject is one of interest at this time to every member and well-wisher of our profession, and more especially as the preparation of the plan for general adoption makes my committee as responsible to you for anything wrong in it as though we were members of your county and state societies, it seems entirely proper that the request should be complied with.

An attempt will be made to place beyond question the truth of the following propositions:

1. That existing professional conditions and estrangements are useless and senseless; that they are hurtful almost beyond calculation to both the profession and the public welfare, and that they are remediable.

2. That the plan of organization is based on our system of civil government; that it was prepared with much care and unselfishness, and that it contains nothing untried, experimental or impracticable.

3. That the county society is not only the unit of the organization, but the source of all authority and power in both the state and national bodies through a representative delegate system, and it is also the only portal of entry to the entire society system.

4. That coincident membership has been an old and perfectly satisfactory method in many states, is essential to complete organization, and that it is just and right. It would be as unfair to permit a physician to become a member of his county society and enjoy all the benefits arising from the labors of the state society, as to permit one to become a citizen of Ithaca or Troy without becoming a citizen of the State of New York and bearing the burdens and responsibilities of the same.

5. That amendment of any part of the plan is purposely made easy and is controlled by delegates from, and responsible alone to, the county societies.

6. That the time has come for unification, and that, while union under a defective plan, which the joint body could modify and improve for the common good, would be far preferable to a continuation of existing conditions, the one now proposed has been found excellent and practical after full trial in other states, and having been prepared away from New York contentions and controversies, it offers a basis for compromise honorable alike to both factions and to neutrals.

In order to establish these propositions clearly and satisfactorily, a brief history of this reorganization movement is necessary. From the very outset the magnitude of our task grew on us. Although in name medical societies—city, district, state and national—existed without number, and medical machinery and high-sounding official titles were provided sufficient for the civilized world, membership in most of them was small and little more than nominal, and, outside of a few states and localities, the profession was so torn with dissensions that it was in chronic disgrace in its own and in public estimation, and in a large measure robbed of its power, by legislation or otherwise, to help either itself or the public, for whose benefit it was supposed to exist. Into a profession already so overcrowded that there was less room and remuneration for the average physician than for clerks and skilled laborers, commercial medical colleges were annually turning loose thousands of new graduates, many poorly equipped for intelligent modern practice, and practically all of them without an hour's training in professional conduct, business methods, the importance of society membership, in which all should have been drilled with the care due to subjects to become of so much importance as soon as they come to serve the public and face the problem of earning an honorable livelihood.

Largely as a result of such lack of training, we found that of the 120,000 registered physicians in this country, only about 30,000—one in four—had ever been members of any kind of society, local, state or national. Most cities were little better organized than the country districts, a large submerged element being often found within an easy walk of imposing medical and post graduate schools, libraries and hospitals, who had long lost hope of advancement, looked on their profession only as a doubtful means of support, while those in the higher ranks wrangled and slandered each other and brought odium on all, and Eddyism and other forms of bald quackery took the cream of a patronage which a united, self-respecting and honored profession would have deserved and received.

It was soon found, however, that these conditions, deplorable alike to the profession and public, were not universal. In Alabama, for instance, under a model plan of organization and resulting united profession, with over 1,500 of the 1,700 physicians members of the county and state societies, medical opinion was sought for the guidance of law-makers, executives and courts, the profession was honored and independent, and quackery was unknown. Kentucky, striving for the same ends under less perfect methods, had had no itinerant or advertising doctor within her borders for ten years, and the profession was aspiring to its rightful place as a directing force in public affairs. In a dozen cities also, usually of the lesser rank in population, under similar influences, harmony, co-operation and measurable prosperity prevailed and was increasing.

Inquiry soon demonstrated that the personnel of the profession was much the same everywhere, and the difference in the conditions found were apparently entirely due to difference in methods of organization. After all proper allowance for personal equation in rulers, governments are liberal or despotic as determined by their organic laws, and probably quite as much as with a nation, the constitution and by-laws of a medical society will set the compass and shape the policy which will largely determine the future for both itself and its individual members.

Influenced by such belief and considerations, my committee began its work four years ago by grouping those

provisions for state and local societies which had resulted in the most effective organizations, and with great care made our first draft of a constitution and by-laws for submission to, and discussion by, conferences of leading men in the various medical centers where there was a reasonable degree of harmony. Later, the improved draft was published in the medical press and in pamphlet form and given the widest possible publicity. As we were performing an important, unselfish and gratuitous public service for the common good, advice and frank criticism were cordially asked from all, and these came freely and helpfully, especially from the better organized states and cities.

With such assistance, and in the light of such criticism, keeping always in mind that the plan should be democratic and conform to our methods of civil government, with local self-government by the county societies as the central idea, a simple but comprehensive system was gradually evolved, almost ideal in its outline and possibilities, which, after full trial under the most diverse professional conditions, has proven entirely practical, being so flexible that it could be adapted to the Cook County Medical Society at Chicago, with 1,800 members, as easily as it could to sparsely settled counties in North Carolina or California, with 10 members. Under its operations in one year in Michigan the membership increased from 560 to 2,100; in Kentucky, from 390 to 1,600; in Tennessee, from 300 to over 1,000; in Missouri, from 400 to 1,500; in Arkansas, from 190 to 703, and in like proportion in every other state adopting it.

It is a thoroughly democratic and American plan, using those much-abused terms in their broadest and best sense. As has been said, the county society is made the broad foundation and source of authority for everything, as well as the portal of entry to both the state and national bodies. If a physician stands well enough at home to secure membership in his county society, he is eligible for membership and for any position of honor or trust in the state and national bodies, and if he loses membership at home, subject to the right of appeal, he loses privileges everywhere.

The house of delegates, the legislative and business body of the state society, like the general assembly of a state, is composed of representatives from the county and district societies, and such delegates are freed from political influence so far as possible by making them ineligible for any of the offices within their gift, and they are responsible alone to the constituencies electing them. As they are in session but two or three days, in order to make the transaction of any business possible, unlike senators and representatives, they sit as one body. This gives a body small enough for deliberative work, and yet gives county societies remote from the place of meeting, and all others, an equal and only an equal voice, in all business affairs if only the delegates are in attendance.

Carrying out the same principle of local self-government, this house of delegates, made up directly from county and district societies, elects from the general membership the delegates who, in turn, compose the legislative body of the American Medical Association. As in the house of delegates of state societies, this being a small body, with its members carefully selected and made ineligible for any other position, with the terms of half the members expiring each year so as always to have men of experience in it, and which can remain in session, if necessary, after the general meeting adjourns, it was hoped to provide a body in which the interest of the profession and of scientific medicine might be considered and promoted in the broadest way.

The question of coincident membership in county and state societies is one which should require little explanation in New York. It has given satisfaction in the association, and has, of course, been under the observation of the society people. You have also had ample opportunity to observe the results of it for years in the neighboring states of New Jersey and Connecticut, where it has been in operation for years. It has been long the practice in Alabama, with the result that about 90 per cent. of the profession are permanent members, as well as in Massachusetts, Pennsylvania and Indiana, and recently in a total of thirty-two states. It is only one feature of the work, but it is so important that any complete or systematic organization of the profession is impossible without it. Besides, the justice of it is beyond question. It would be as obviously unfair to permit one to join his county society and enjoy all the benefits of the state society arising from its legislative, educational and other expensive and responsible labors, without assisting in its support, as it would be to permit a man, if one could be found so foolish and selfish as to ask it, to become a citizen of Buffalo, Syracuse or Rochester and enjoy all the benefits and protection of the state government without becoming a citizen of New York.

It is true that in nearly every state where this plan of organization has been proposed, as was natural and to be expected, academic and purely theoretic objections have been made to some feature of it, usually to the council, the house of delegates or to coincident membership. Such objection has always been made in advance of a trial of them, and they have been confined almost entirely to states which have been practically without organization heretofore. Conditions in Iowa illustrate this point well. The county society at Dubuque, which has reorganized and applied for a charter within the last ten days, raised many such theoretical objections to the plan before they had tried it, while 88 counties in the same state, organized under it, and realizing its practical benefits, are loud in praise of the very provisions to which their worthy neighbor at first objected. It is a source of much encouragement that this has been the experience of over 1,500 counties which have reorganized.

It would be pleasant to comment on each provision of the plan in detail if space permitted. Suffice to say, that it was intended only as the foundation and framework for a broad and comprehensive system to be recommended for universal adoption; that nothing was included except for what appeared the best of reasons, and that it is susceptible to infinite elaboration and improvement in detail as the profession of any state or county develops under the catholic and co-operative spirit which it inculcates, and which is so much to be desired.

Attention is called to the fact also, that much contained in the by-laws, where a wide departure is made from the brevity and compactness of expression adhered to in the constitution, is suggestive and educational in character, much of which would not be necessary if such an organization as is contemplated was already in existence. We thought it as important, under existing conditions of discord and demoralization, to furnish incentives to this work, to give practical and detailed information as to how it was to be done, and to put the reasons for it all within the easy reach of

those whose duty it would be to discuss the subject and do the work, as to furnish the framework of which, as the result of years of devoted labor, they were to make a complete edifice occupied by a united and harmonious, or at least a decently co-operative and self-respecting profession. For many reasons, too, amendment to the plan is purposely made easy. If, after trial in any state, anything is found obsolete or impracticable, it can be easily eliminated or replaced by something better adapted to existing needs, by the house of delegates, subject to instructions from the county societies, at any regular meeting, after such an amendment has lain on the table for one day.

Unification in New York has been so long the dream and hope of its own profession, as well as that of the entire country, that now, when this seems about to be realized, it may be that a majority of you will consider mere methods and details of organization important only insofar as they are likely to hasten or delay the union. In part, this view of the matter is both natural and correct. A cordial union under a defective plan, which could be modified and improved to meet the needs of the joint body, when there would be unity of purpose and interest for the common good, would certainly be far better than to perpetuate the two bodies, even with model organizations for both, with the strife, discord and loss of public respect inseparable from such conditions anywhere.

Still, if it can be shown, as the writer believes will appear on the most critical investigation of what is now proposed, that it furnishes ready to your hands a plan of organization to which you may build and add with confidence in the results, and which will at the same time hasten unification by furnishing a basis of compromise between factions so long divided that suspicion and jealousy have become so much mental habits that neither will be willing to accept what the other proposes, it should, and I am sure will, receive respectful consideration at your hands.

In the era of good feeling and enthusiasm which must follow unification, under such a broad, liberal and comprehensive plan, which would give an equal voice and power to the individual physician in every county, organization should and would make rapid strides, and the possibilities opened up to your profession, and then to your people, would be almost beyond conception. In the face of such possibilities, standing on the threshold of such accomplishments, petty prejudices and personal interests appear so insignificant that they should find no place in large minds.

Then, as New York would be in perfect alignment with her sister states, with proper education and effort, everything desirable would, in time, be brought within reach of the united profession of the entire Union. The complex and difficult problems before the profession of this country incident to our unprecedented advance in population and civilization, and which must be solved by it, if they are to be solved, will tax its highest intelligence and energies at its best. Provision can then be made for continuous scientific research, and for systematic collective investigation into the causes and prevention of disease on the large, generous lines demanded by the vast interests involved. The vexed problem of medical education can then be taken up with confidence and justly and wisely solved. Reciprocity in licensure and membership between states can then be discussed from the standpoint of the common good and settled on some equitable basis. Constructive statesmanship can be substituted for the narrow, time-serving political methods of the present in municipal, state and national public-health affairs, and our great profession—great even now in spite of its divisions—united, elevated and ennobled, would come to occupy its rightful place as one of the greatest of modern forces for the guidance and protection of our people. It would be an honor, even to New York, to lead in a reform promising such results, and to set an example in complete organization, which less favored and weaker states would imitate with both pride and profit. First of all, leading to all, and above all, in the words of your victorious commander, greater in magnanimity even than in war, "Let us have peace."

THE HISTORY AND ETIOLOGY OF "MIGRAINE."

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The word *migraine* (*megrim, the megrims,* etc.) is the vulgarization of a misnaming and meaningless term for a malobserved and trivial symptom, which in the majority of cases is not present, of a widely prevalent and ingravescent disease, with indescribable symptoms, which wrecks life and morbidizes the mind, the etiology and pathology of which are unknown, the location or organs affected being also unknown, and of which no treatment avails.

The term is a corruption of the Greek Ἡμικρανία and the Latin, *Hemicranion* or *Hemicrania,* taken to mean a pain in one side of the head. The word is, of course, an absurdity, because it denotes not pain, but only half-headedness, the idea of pain having no part in the construction of the word. One may perhaps speculate in vain as to the reasons of the Greeks for making half-headedness a synonym of pain in or on one side of the head. The fact itself seems to imply that when the word was born there must have been many patients who were so greatly tormented with this unilateral pain of the head that it was at once understood when such a patient was spoken of as "half-header"—"the man (or, more probably, woman) with half a head." The term was used in this way by Hippocrates, Galen and other Greek physicians with the same indiscrimination to express all headache, until Alexander Trallianus in the sixth century recognized that there were two forms of headache, and he urged that hemicrania or migraine was that which resulted from gastric disease or suffering.

In the seventeenth century the kinds of headache began to multiply, and they have continued to do so until now they are almost innumerable. The more cool-headed, at least not half-headed, English of one or two hundred years ago, began to recognize that "half-head" did not imply pain, and that pains in the head were by no means one-sided. Migraine, they saw, was not etymologically a pain, and the pain that existed in patients was not migrainous. Thence began the use of the good old English word *head-ach.* In his excellent dictionary published in 1809, Parr refers migraine or megrim to *cephalalgia,* and treats of the whole subject of headache, migrainous or not, under this heading. It was a sensible thing to do. It followed that the headache accompanied by gastric disorder, nausea, vomiting, indigestion, etc., naturally and rightly received the name *sickhead-ach,* or as we now say, *sickheadache.* With so-

called "scientific" medicine (which in so far as pertains to this disease is absolutely as unscientific as was that of classic or medieval times), there was a relapse to the absurd term migraine, and under that caption are now published hundreds of erudite monographs that throw little or no light of knowledge on the ludicrous tangle. The word is now applied to a symptom-complex of infinite variability to indicate a very common and violent disease, the cause of which is wholly unknown, and for which there is no cure.

The old term, "sun-pain," applied to the disease is of illuminative significance. It was so called because it lasted, in the olden times when the theory was formed, only so long as the sun shone, and ceased with darkness. Now, in those times all reading and writing was done by daylight; at night, the absence of artificial lights compelled cessation of literary, sewing, and hand-craft occupations. With this ocular rest, as always, came immediate relief of the ocular reflexes called "head-ach" and "megrim."

In Literature and in History, the disease itself has played a tremendous rôle, and it is not surprising that writers should have busied themselves with it. To attempt any culling or epitome of the literary allusions to headache would fill volumes. There is hardly an observant author who does not give intimations of the fact that must have been either before his eyes, or in them, or behind them, almost every day in his life. For as a source of pain and suffering, as a molder or destroyer of literature, as well as of lives, headache has been, I doubt not, one of the greatest producers of evil. In any city, village or community of the civilized world, if one will ask any woman, and every second man, he will be told that all know of relatives, friends, and even whole families, constantly suffering from headache, sick-headache and other eyestrain affections. Willis, an ancient writer, already said of this affection:

> There is none but is sometimes obnoxious, so that it has become a proverb as a sign of a most rare and admirable thing "that his head did never ake."

Other diseases, the plagues, poxes and punishments of evil and unsanitary living, came and went, but headache always remained with men and women, at least since civilization came to them.

An old English chronicler speaks of one:

> "A fervent mygreyn was in the right syde of hurr hedde."

Other references are:

> "Heyera hermetis purgeth the hemicran."—*Lloyd, Treas. Health*, 1585.
>
> "Oyle of fystikes healeth the hemicrane and watchynges."—*Do.*
>
> "Here hence springs the head-ache . . . which last we call the Hemicrany or Megrim, possessing but the one side of the head."—*Vaughan*, 1600.
>
> "The bones help the Hemicrania."—Lovell, 1661.
>
> "Subject to the sickness called Megrim or Hemicrain."—*Blount*, 1656.

The opinion of the writer in that monument of French erudition—Larousse's *Grand Dictionnaire Universel*—is plainly implied in the opening sentence of the article on *Migraine:* "The disease which physicians have baptised with the fine name of Hemicrania, without, for all that, feeling themselves under any obligation to cure it." "The shame of medicine," the writer calls it, later.

Méry says that Migraine is "a wonderful invention which will last until there are no more women."

Samuel Johnson quotes Bacon's Natural History, which says that "in every megrim or vertigo there is an obtenebration joined with a semblance of turning around." Both of these chief symptoms, it should be noted, are visual.

Pope wrote:

> There, screened in shades from day's detested glare,
> Spleen sighs forever on her pensive bed,
> Pain at her side and megrim at her head.

"The sole thing that brings me relief," still say many patients, "is absolute darkness."

In his "Physiology of Marriage," the Frenchman, Balzac, best fitted to give expression to the national opinion, gives a vivid picture of the disease as illustrated in upper-class families. It is always the wife who is afflicted. He pictures it as the queen of diseases, the most pleasant and at the same time the most terrible weapon which a woman can use against the husband. "I have the migraine," ends all controversy. But while ridiculing the disease as a makeshift of these cunning ones to deceive, Balzac gives an admirable description of the attack, and lets us see that the assumed disease is certainly an imitation of the real, and perhaps the idea of trickery was read into the real experience by the husbands and the romancer. Her book, he says of the patient, is at her feet; the least noise is unbearable; her voice is weak; she silences her husband and all his reproaches with a look. The doctor is called in; he advises exercise, and madam recovers. But she gets her way, good or bad, and beats all plots or plans by means of her migraine—the protector of illicit loves and the confounder of virtuous husbands.

For a thousand years in Greece not even the fathers of medicine noticed that the aches of the head were not unilateral. Alexander of Tralles made one distinction, namely, that the stomach was implicated in some headaches. Even this was forgotten, and for another thousand years there was no observation that resulted in distinctions. Then began a luxury of growth in nomenclature which has increased, until to-day all that one can say is that "there are as many kinds of migraine as there are heads that suffer." Even a few years ago Nietzsche had to protest to his scientific physicians that his disease was not migraine, because it was not on one side of his head. The spell or hypnotism of a badly-formed, meaningless word thus continues to-day to dominate observation and facts. And all this despite the truth that so many physicians (being students)—Lepois, Airy, Parry, Dubois Reymond, Travers, Fothergill, etc.—were sufferers from the disease.

Anthropologists have pretty nearly come to an agreement that prehistoric and savage trephining, so general in all races and times, was probably done for the purpose of relieving headache. The location of the hole made in the savage skull, in order to let out the evil spirit, does not warrant the conclusion that the headache was particularly on one side. It may have been so, but the arrow-makers, basket-weavers, etc., in whom it probably chiefly occurred, were not so discriminating as to point it out to the medicine men. Both probably thought of the living cranium as a more or less hollow organ, such as they found it in their ancient dead. The Greeks, and after them the Romans, and then the medieval nations, thought of the headache as a hemicranous ache, although many patients, and most of them in the crisis of the attack, found the ache as much on one side as the other.

Classification and Etiology.—Sauvages gives ten forms: ocular, dental, sinus, coryzal, hemorrhoidal, hysteric, purulent, insectal, nephralgic and lunatic. The great French Dictionary of Medicine finds it best to limit the varieties to two chief classes, the simple and the constitutional. Many authors recognize, 1, the idiopathic; 2, the sympathetic (disease of the viscera); 3, the symptomatic, i. e., from lesions of the encephalon or its envelopes. In Parr's Dictionary (1809), cephalalgia is divided into:

1. The mild, i. e., cephalalgia.
2. The inveterate, or cephalæa.
3. The one-sided—hemicrania, migraine, etc.
4. In one temple, crotaphos.
5. In the crown, i. e., clavus hystericus.

But he says it may be symptomatic and idiopathic, adding that it is often impossible to ascertain the disease of which it is a symptom, and that in some it is unconnected with any other complaint.

The cause of migraine, if known, would dictate the classification. The fruitlessness and self-contradictions reached by all the classifications that have been devised shows only what is frankly confessed, that none has had the hint of a suspicion of the true etiology. The primitive trephiners of prehistoric and present-day savage times were as sure of their pathology as of their therapeutics. Aretæus described migraine under the name of "heterocrania," and with considerable accuracy—better, in fact, than Galen. Aurelianus finds that women are more subject to it than men. Serapion thought the disease sprang from the digestive organs.

Alexander Trallianus continued the great blunder that has reigned supreme almost to our own day, and still rules many minds, that in the symptom complex we now call sickheadache the stomach is primarily at fault.

Charles Lepois, 1618, taught that migraine was caused by fermentation of the biliary matter which distended the membranes of the brain. Thus began the fashion of using those sacred mumbo-jumbo words, "bile," "biliousness," "bilious headache," "liver," etc., which have been of such potent-impotent service in the literary and social history of the last 200 years.

Wepfer ascribed the disease to stagnation of the exudated blood serum in one half of the head. Theories as metaphysical ruled the minds of Hoffman, Willis, Fordyce and others, who credited the disease to animal spirits. Tissot, in 1813, returned to the gastric theory. De villiers and Deschamps attribute it to disease of the frontal sinus. No one could for long get far away from the ocular idea or location. Schönlein called the disease cephalic hysteria; its seat in the nerves of the forehead and temple. Romberg called it cerebral neuralgia. Chaussier and Pinel charged the disease to neuritis of the seventh and especially the fifth nerve. Professor Brouillard thought the third nerve was the sinner. Auzias-Turenne thought compression of the trigeminus in the cavernous sinus was the cause. Calmeil said that sickheadache was a double lesion; the flow of blood to the central and to the peripheral system. Piorry held it to be due to an ascending neuralgia, starting from the nerves of the iris and pathologically reflected from the sensitive centers to other organs. Charcot insists on an intimate relation with rheumatism, gout, hemorrhoids and gravel. Of 30 women with nodular joint affections, 12 had previously had intense migraine.

The number of primary or secondary causes of the disease that have been noted by physicians' reports is astonishing. In Dubois Reymond's own case the attacks usually followed fasting or lack of food, and many have alluded to this. On the other hand, scarcely less frequently it is caused by the presence of food. Fothergill, with a hundred others, is sure that diet, "the kind or quantity, or both," is at the root of the mischief. He says that butter is the greatest cause, as "nothing more speedily and effectually gives the sickheadache, and sometimes within a few hours." The next most important articles are "melted butter, fat meats, spices, meat pies, hot buttered toast and malt liquors." English authors generally incline to the "bilious," gastric or intestinal cause of the disease. Fothergill's philosophy of the disease was that an acid or bitter bile in the empty stomach or duodenum, favored by certain foods, was the cause.

If fasting will not produce the disease, overeating will do it. Hunger and satiety are equally effective. Dubois Reymond, again, says his attacks were generally preceded by constipation. Wine, even sacramental wine, the least fragment of burnt pastry, are the great causes testified to by a physician as producing the attacks in himself for thirty years. The rôle of "biliousness," the "bile," "liver," "stomach," "dyspepsia," "disorder of the bowels," etc., is a big one in the great tragicomedy during the last several hundred years. Dr. Parry's own attacks were caused by the state of the stomach, "although they occurred without any feeling of indisposition at the time, either there or elsewhere. They generally *went off* with a movement in the stomach producing eructation." "Anything disagreeing with the stomach"—a hearty meal, meats, lack of meats, and every possible article of diet or lack of it—these *ad infinitum* have filled the accounts of patients and physicians. All of which is, of course, *post hoc* logic.

Perhaps next in emphasis and number of mentions after the digestional cause is the sexual. One physician has devoted a whole treatise to "catamenial megrim." Liveing at once stumbles on the fact that men have monthly attacks as well as women, but that does not deter him nor others from the hypnotism of coincidental and succedant disease viewed as cause. Puberty is a great disposer, but why it is so none can say, and the exceptions to the rule are far more numerous than the hits. The greatest reliance is placed on the supposed fact that the menopause brings cessation of migraine. Here, again, the inaccurate observation and domination of theory is noticed, because in the majority of cases the attacks increase in severity for ten or more years after the menopause, and in men the menopausal factor is hardly present and they also suffer up to about 60.

Cephalalgia Spasmodica, the Sick Headache, Parr describes in a separate paragraph, but his first sentence is, that he considers it separately only out of respect to Fothergill, for "this afflictive malady scarcely differs from the symptomatic head-ach, arising from the stomach."

Loud noises, foul air, smoke, drums, military music, review-days, etc., also, it seems determine attacks. But especially smelling, strong odors, particularly of drugs (turpentine, musk, valerian), even roses and flowers, are also effective. The smell of a postmortem room, of a hospital ward, always caused migraine in a great hospital physician, "one of the most brilliant writers," etc. He missed it but once, and that was when the wards had been watered with chlorinated water!

Meteorology is the great comfort of certain physicians in explaining migraine. In 1903 a great one has sought

refuge in it when frightened by the ocular theory. Dr. LePois was attacked "on every change of the weather." Tissot and Labarraque are sure about atmospheric states, changes of season, or of weather. A large number of Symonds' patients blamed their attacks to weather, or no weather, to thunderstorms, etc. Dr. Airy's attacks were favored by windy weather—several of his family synchronously, and unknown to each other. Direction of the wind is another cause, frequent in Libert's cases. The southwesterly wind is effective at Zurich. Wagner, Nietzsche and others note the power of Föhn to cause the disease.

Mental excitement, emotion, vexation, distress, fright, passion, sexual emotion, etc., have been noted by Tissot, Symonds and many others as influential causes. "Nursing the mother through a long illness," "prolonged lactation," "poverty," "marriage ten years previously," frequent child-bearing, etc., are mentioned. On the other hand, freedom from the habitual attacks is noted during pregnancy.

Violent exertion, gymnastics, and just as frequently, fatigue, are charged with producing the disease. Lifting heavy weights, sudden effort, straining, running, a hard day's washing, skating, traveling, riding, are among other causes of the disease.

"Prolonged discharges," "prolonged indigestion," "disordered bowels," "impaired general health," "debility," "leucorrhea," are recorded observations. The cart is before the horse often, and often there is no horse or no cart.

"The state of sleep, or rather, perhaps, of waking," also causes the attacks, according to Liveing. One wonders if the neither-waking-or-sleeping state would not also do the same. To wake up from sleep seems to have been a frequent cause, and to be awakened before time. Prolonged watching, resistance to sleep, etc., are also listed.

The thousand causes that have been given remind one of the symptoms of the homeopathists in the "proving" of their drugs. However foolish scientifically they are also pathetic and confessions of impotence in the face of a great mystery.

In Symonds' 90 cases the causes are thus classified:

Emotional disturbance	53
Indiscretions of diet	19
Denial of diet as cause	62
Action of the bowels	13
Denial of this cause	54
Fatigue	32
Catamenia (out of 76)	35
Atmospheric states	48
Thunder	25

Analysis of these figures is both edifying and mystifying and amusing.

Dubois Reymond held to the theory of a tetanization of the cervical sympathetic, and the great modern French *Dictionnaire des Sciences Médicales* agrees that this is the best theory.

The bibliography of the subject would occupy a volume. The Index Catalogue and the Monographs of Liveing, Spitzer, Cornu and Möbius may be consulted for references. All text-books on general medicine and nervous diseases, of course, add to the literature, without adding any clarification of the subject.

Hooper's Medical Dictionary says migraine "arises from a state of the stomach," and Parr's Dictionary traces causes to bony fragments, exostoses, tumors, worms in the brain, etc. Parr finally breaks down, however, and in despair says: "Authors have endeavored to distinguish by the particular kinds of pain, which of these causes may have produced it, but language fails in describing the different feelings and their variety." One of the reasons for the despair of Parr and of all others is that the whole life of the patient was not observed. The clinic was of the day, not biographic. This disease is one of the whole life.

Airy and Förster think cerebral anemia is the cause. Sarda says: "How many dyspeptics have hemicrania! How many migrainics have no dyspepsia?" Liveing's view is that the disease is of the nature of a nerve storm from the sensory centers, and is related to epilepsy.

As for definitions, one modern one may serve for many: "A complex neuralgia of the nervous centers, of the nerves of sensation and of vasomotor nerves, characterized by direct or reflex modifications of the intellect, of sensibility, and of local circulation, also of general circulation and of great functions." Almost all authors emphasize the rôle of "heredity"—"the unknown god ignorantly worshipped." Osler's summary is, "the nature of the disease is unknown."

In a general way all theories may be grouped into four large classes:

1. The cause is central. The authors upholding this view are Liveing, Romberg, Anstie, Leubuscher, Jackson, Gowers, Möbius and others.

2. The vasomotor system is at fault. The advocating authors, according to Spitzer, are Dubois Reymond, Möllendorf, Eulenberg, Mauthner, Siegrist, Oppenheim, Whytt, Latham, Lauder-Brunton, Hammond, Wilks, Pemberton, Peake, Handford, Charcot, Galezowski, Féré, Thomayer, Lyon, Antonelli, d'Astros, etc.

3. Toxins are the etiologic factors—held by Galen, Serapion, Brunton, Hecker, Haig, Navarre, Wallace, Claus, Rachford, Steckel, Strümpell, etc.

4. Reflexes are the causes, supported by Tissot, Hack, Schäffer, Schech, Sommerbrodt, Zien, Dobisch, Martin, Seguin, Greenwood, Terrien, etc.

Each one of these may be and are combined with either one, two or three of the others, until only the most patient of experts can distinguish the divisional distinctions. To all others confusion soon becomes ever worse confounded with each hour's study. When one has become migrainous with attempts even to understand the theories he will agree with Osler and others that the nature of the disease is unknown. *"Autant de tetes, autant de migraines!"*

Prodromal Symptoms.—The typical attack is said to be usually ushered in by pain over, in, behind or above one eye, or in one temple, or by vague symptoms of gastric malaise, anorexia, lassitude, sleeplessness, or, conversely, on reading or writing, with sleepiness. The prodromes that have been noted are many. With or without the pain in the forehead, eyes or temple (or in all three), scotoma scintillans may precede the attack, and a number of authors and many practitioners still think this is a necessary part or prodrome of "true migraine." (This symptom has itself been called "ophthalmic migraine.") But if this is so, we can then have migraine without unilateralism, without pain and without implication of the digestive organs, for I am sure that close observation of many clinical cases will demstrate that the majority of attacks of sickheadache are not preceded by scotoma scintillans; and that in fully a half of cases of scotoma this symptom is followed by no headache or other symptom whatever.

I have scrutinized the facts in not less than a thousand private cases of typical sickheadache, and myself and assistant are sure that at least half do not have the

prodrome. On the other hand, questioning all patients who have had this symptom, shows that the same proportion do not have any headache following. Until I secured a perfect correction of my own ametropia I had frequent attacks of scotoma scintillans—numbering several hundred in twenty-five years—and I never had a headache in my life. Hippus and hemianopsia are also other ocular prodromes.

"The Typical Attack."—The most common, and especially the initial symptom, is that supposed to be expressed by the name—a pain in one side of the head. This pain is almost always described as over one eye, in it, or behind it, or in one temple. One after another there are or may be additional symptoms until the whole encephalon becomes unendurably painful and sensitive, and nausea and indescribable wretchedness follows, violent emesis then ensues, lasting for a few minutes, or for days; there is then a sudden clearing, and, in otherwise healthy and strong natures, a quick return to health. The recovery may be slower in the weak or otherwise unhealthy. Despite the fact that the digestive disorder is a late or last and infrequent symptom of the disease the gastric origin is still the favorite theory today. But it must not be forgotten that the testimony of all writers agrees with that of personal clinical experience: the number of atypical cases is a hundred times greater than that of the so-called typical. The so-called typical disease is the severe one, that in which there will be at least the two chief symptoms of headache and nausea. Hence the applicability of the term sickheadache to this condition. But, again, the vast majority of cases of what is evidently the same disease, do not reach the extreme of nausea or even of vomiting.

One may with truth say that there is no typical disease. The vast majority of cases have no aura. This pathologic house has no portico or front door. Almost as many cases have the aura only, without other symptoms. The house, then, consists solely of front door. Parkman and Spencer and others avoided what the writers would call migraine, by most careful and deft avoidance of the causes of it, and yet their disease was essentially the same as that of George Eliot and Nietzsche. Hemicrania is often not hemicrania, i. e., it is bilateral instead of unilateral. All pain in the head may be absent and the disease have the same cause as in headache cases. The digestional reflexes are in the great majority of cases entirely absent, or they may be of a hundred types. What shall, therefore, be said of a disease that has no true typical symptoms, which hardly ever has all of those called so, which usually has only one, which may consist solely of a prodrome, or without one of the usually recognized symptoms? It is time that it were reborn, renamed, rechristened and reëducated.

The recognition of the essential morbid condition is further rendered more difficult by the intermixture of an infinite variety of symptoms that often mask or complicate the clinical course, complaints and diagnosis beyond recognition. Thus has been completed the utter chaos which to-day characterizes the whole subject. There is no agreement among a multitude of theorists; there is the most ridiculous weedy growth of contradictions and inconsequence concerning etiology; and, of course, there is no therapeutics whatever. Migraine is the puzzle and the opprobrium of medicine. The conclusion of the article in the greatest medical encyclopedia is: *Autant de tetes autant de migraines*, which, translated into scientific language means that the almost unique cause of migraine, astigmatism, etc., differs in each case; the exciting cause, occupation and use at near-range of the eyes, differs no less; the soil, i. e., the nervous and digestive systems, into which this infinitely varying seed falls, are also never alike in two cases. How certain, therefore, must it be that the morbid results are so lawless and seemingly illogical.

The terminal stages of the attacks also illustrate the death-and-life struggle of the organism with the excruciating disease. The one, two, or three-day vomiting and retching described in the cases of Mrs. Carlyle, Nietzsche, etc., is suggestive. There is sometimes a flow of tears, sometimes abundant secretion of urine, a mucous flux from the nose, lavish sweating of the feet, hands, or half of the face; there may be nose-bleeding or even arterial hemorrhage.

A large clinical experience with migrainous patients shows that their headaches are of an apparently amazing variety of kinds, and seemingly, of causes. An examination of the literature also illustrates the same fact, each of these kinds by one or by others being called or described as migrainous. The mere index or enumeration of these kinds of headache would fill many pages. In the first place there is a long list of headaches plainly due to organic and systemic diseases, such as tumor and traumatism of the brain, meningitis, fevers, infectious diseases, etc. These are, of course, excluded. They are few in number compared to the nonsymptomatic and functional cases, but in many treatises they fill most if not all of the field of vision. Of the functional kinds one may likewise construct a huge list: the nervous sick, periodic, hereditary, constitutional, dietary, hemicranic, menstrual, ocular, nasal, dental, constipational, bilious, indigestional; those from intellectual overwork, physical exhaustion, worry, lack of food, from study, bad light, bad ventilation; from coryza, influenza, rheumatism, uterine disease, pregnancy, hysteria, anemia, diseases of the spinal cord, of syphilis, and so on, and so on. And, finally, then, is a very large class that can not be ascribed even to the vaguest and most far-off cause. Any one, two or dozen of the kinds may be mixed in all proportions in any one case, and only omniscience—not possessed at least by young practitioners—could discern the explanation and dissolve the mystery.

Lastly, the location, character and degree of the ache in, about, on and below the head, in spots, in halves, or of the whole, make confusion worse confounded.

(To be continued.)

Clinical Report.

A PARASITIC MAGGOT,

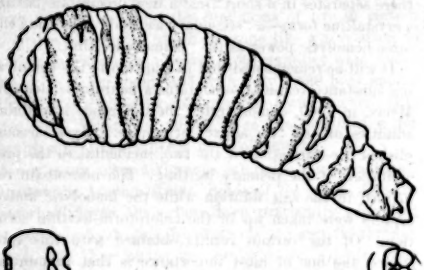
GASTROPHILUS EPILEPSALIS (?), IN THE SKIN OF AN INFANT.

F. L. WASHBURN, A.M.
MINNESOTA STATE ENTOMOLOGIST.
ST. ANTHONY PARK, MINN.

In September last Dr. Burnside Foster, St. Paul, Minn., sent me for identification some maggots in alcohol which had been taken from a patient, August 15, at Superior, Wis. He stated that the patient was a female infant three weeks of age, born prematurely at the seventh month and bottle fed from birth. One of these maggots came from a pustule on the back of the neck, one from the palm of the hand, one from beneath the jaw and one from between the great and second toes of the right foot. He further stated that the infant had slept in its carriage out of doors for many hours nearly every day since its birth.

I at first thought that these dipterous maggots belonged to the old genus *Lucilia*, but having no speci-

mens in alcohol with which to compare them, I sent them to a specialist on diptera at Washington, D. C., without data. This specialist declared the specimens to be *Gastrophilus epilepsalis* (French), French names, and describes this species in the *Canadian Entomologist*, vol. 32. It was named from a larva, great quantities of which were found in the evacuations of a child subject to periodic epileptic spasms. As these attacks ceased for a time after the use of purging medicines by means of which large numbers of the maggots were voided, Professor French in his article appears to have assumed curiously enough that the spasms were caused by the "reproduction of the larvæ in the intestines." This statement is absurd, because with a few rare and well-identified exceptions reproduction in insects is confined to the adult or perfect form. He called these parasites *G. epilepsalis* because the patient had all the symptoms of epilepsy, the patient having globus hystericus with the spasms and the other usual symptoms, including mental aberration, accompanying the attacks. This intestinal parasite evidently has no connection whatever with epilepsy, and is wrongly named. The curious part of the affair, as far as the writer is concerned, is the fact that the Washington specialist declared that Dr. Foster's maggots, which were cutaneous, were identical with Professor French's type, an intestinal parasite. Two prominent entomologists take exception to his identification.



Maggot obtained from infant by Dr. Burnside Foster, enlarged 17 times.

It is a pity no imagoes were reared from these Wisconsin larvæ, for that would have settled the identification. Certainly much remains to be found out about this variety.

In this connection Prof. John B. Smith, state entomologist of New Jersey, cites a curious case of a *Cuterebra* larva, belonging to the *Oestridæ*, being taken from the neck of a woman, the supposition being at first entertained by her physician as well as by herself that she was suffering from a boil, and not until the treatment was changed and the "boil" opened was it discovered that the trouble was caused by a dipterous parasite. *Cuterebra* is a bot fly, affecting normally rabbits and squirrels. The genus *Gastrophilus* belongs to the family of flies known as *Oestridæ*, types of which are found in the bot fly of the horse and in the so-called ox warble which renders the hides of cattle sore and seriously impairs the value of the hides. Both of these flies lay their eggs on the hairs, which eggs are later licked off, thus finding their way into the alimentary canal.

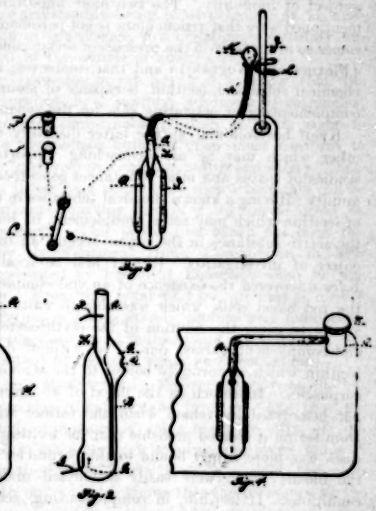
New Instrument.

A SERVICEABLE FORM OF CAPILLARY ELECTROMETER.

C. C. GUTHRIE, S.B., M.D.
(From the Hull Physiological Laboratory, University of Chicago.)
CHICAGO.

I have been using the capillary electrometer, figured below, for some time, and it has proved so satisfactory that I consider it worthy of a brief description. I ordinarily work with the capillary tube horizontal and the description will be of it in that position.

Figure 1 shows the appearance of the capillary and cup when viewed from above. A is a glass tube drawn into a capillary and fused into the acid cup B at X. The superior and inferior surfaces of the cup B are flat and parallel. Each surface is dilated into a small reservoir C and E (see Fig. 2). C has a hole in the top which is sealed with acid-proof wax after the cup is filled with acid, care being taken that a large air-bubble remains in the reservoir. E serves as a reservoir for the overflow mercury from the capillary tube and has a platinum wire, G, fused into the bottom. The capillary is in contact with the internal surface, and in the median line of the top wall of the acid cup. F is a platinum wire fused into the tube, A. The tube and cup are mounted on a fiber base, as shown in Figures 3 and 4, the platinum wires, F and G, being connected with wires running to the short-circuiting key, O, and binding posts, P. and P'. Tube A (Fig. 3) is connected by



means of a piece of antimony rubber tubing with the glass pressure reservoir, K, which is provided with a mercury trap and is fastened to the post, J, by means of an adjustable clip, L. The post is made with a hinge joint which permits the use of the instrument with the capillary in either a horizontal or perpendicular position. The post is graduated in mm. to show the mercury pressure. In Figure 4 a modification of the pressure arrangement is shown, with a longer tube, A, bent at a right angle so that the end, which is provided with a mercury trap, is brought into contact with the air-pressure reservoir, Q, to which it is firmly cemented. The pressure in this form is regulated by the screw, N. The hole, I, is closed by cementing a sheet of glass across the bottom flush with the inferior surface of the base (the object of this being to protect the microscope in case the acid cup should be accidentally broken). The instrument is fastened to the stage of an ordinary microscope by clips.

This form is as sensitive as the ordinary types. It is always ready for use; it may be turned in any position without spilling acid or mercury; and it is not easily broken or got out of order.

My thanks are due Dr. E. P. Lyon for valuable suggestions; and Mr. F. H. Rieske for his assistance in working out the mechanical details of the base, and assembling the parts.

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A CRYSTALLINE PRODUCT OF VENOM.

In a former issue[1] we noted editorially certain recent advances in the study of venoms, and emphasized the importance of the new facts in relation to the general subject of immunity. The two most important points mentioned were that venom alone is not poisonous but becomes so in the body in the presence of serum complement (Flexner and Noguchi); and that, moreover, a known chemical substance, lecithin, is capable of assuming the complementing or activating rôle for the venom.

Kyes[2] has followed up the latter discovery with another which may be of far-reaching importance in studies of toxins and other substances concerned in immunity. Having a known chemical substance in the form of lecithin which may act as complement, its relation to the active substance in the venom became an important object of investigation. It may first be recalled that Kyes discovered the existence of an endocomplement in the red blood cells, which was able to unite with the venom to cause the solution of the erythrocytes. This endocomplement turned out to be without doubt the lecithin which is normally bound to the stroma of the corpuscles. Inasmuch as the blood of all animals was not hemolyzed by venom when the former was freed from serum it seemed probable that the lecithin in such cases was more firmly bound to the corpuscles than in the bloods which were easily hemolyzed under these conditions. If lecithin, in complementing, acts as serum complement usually does it would combine with the venom intermediary body only after the latter had united with the corpuscles. However, under certain conditions even serum complement may unite with the intermediary bodies without the medium of a cell. This phenomenon has been termed deviation (Ablenkung) of the complement—the phenomenon of Neisser and Wechsberg. The most important feature of Kyes' latest work is that he has been able to bring about just such a union of the activating lecithin and the venom amboceptor (as the active substance would be called according to Ehrlich's nomenclature) and to obtain this new body in the form of a pulverulent precipitate. A 20 per cent. solution of lecithin in chloroform is made, and over this is placed 40 c.c. of a 1 per cent. solution of dried venom in 0.85 per cent. sodium chlorid solution. This is put into a shaking apparatus for two hours and then centrifugalized. The shaking produces intimate contact of the chloroform soluble lecithin with the water soluble venom and during the process the union of lecithin and venom has occurred, the new product remaining in solution in the chloroform. From the chloroform it is precipitated by the addition of five volumes of pure ether. The precipitate is washed repeatedly in ether and finally separated by centrifugation and dried, or it may be kept indefinitely under ether. The product was found to contain quantitatively the toxic principle of the original venom. It had, moreover, a wider range of activity than the venom, inasmuch as the washed blood of certain animals which was resistant to crude venom was now dissolved with the same readiness as the more susceptible bloods by the precipitated product—cobra-lecithid. The explanation lies in this, that the precipitate carries with it its own complementing substance, i. e., the lecithin portion of the compound. Interest also attaches to another point. If the cobra-lecithid is dissolved in water, there separates in a short time a new precipitate having a crystalline form—a "secondary lecithid" possessing the same hemolytic power as the "primary lecithid."

It will be remembered that in addition to the hemolyzing substance venom also contains a neurotoxic element. Myers, in 1900, demonstrated the difference in cellular affinities of the two active principles. Kyes accomplished the separation of the two, incidental to the precipitation of the primary lecithid. The neurotoxin remained in the salt solution while the hemolytic amboceptors were taken up in the chloroform-lecithin solution. Of the various results obtained with this substance, the one of most importance is that immunization with the crystalline product yields a specific antibody for the hemolytic agent of the venom as well as for the cobra-lecithid.

It is difficult to appreciate the full significance of having this, first, pure, crystalline compound of a toxin. Other toxins have been brought down mechanically . . . the albuminous bodies of a medium by the use of ammonium sulphate and other precipitating agents, but this is the nearest approach so far to the chemical isolation of one of those substances so important to life and general economy. Scientists have had to content themselves with observing the remarkable effects of toxins and immune serums, and with theorizing as to their probable albuminoid nature and their mode of action. They have never been able to see and analyze chemically the pure substance. It is reasonable to suppose that the work of Kyes may prove a point of departure for investigations of the greatest importance. The possibility of being able to obtain certain bodies in pure concentrated form may mean more than we can at present appreciate. With such substances it may be possible to obtain a heretofore unheard-of degree of immunity, and yield us more powerful antiserums. Perhaps various other toxins depend for their activity on substances contained in the cells themselves. It does not follow that it would be

1. THE JOURNAL, April 25, 1903, p. 1148.
2. Berl. klin. Wochensch., 1903, Nos. 42 and 43.

lecithin in all cases, so all toxins may never be reduced to lecithids. There is, of course, abundant room for theorising and an unlimited field for investigations of a like nature.

THE RESULTS AND PROSPECTS OF TENEMENT-HOUSE REFORM ABROAD.

The most striking victories of sanitary reform have been those won in and over the slums of the great English and Continental cities, and the call to arms has usually come through the medical profession, for although these reeking nests of unwashed humanity have shocked the moral sense of the public as nurseries of crime and physical degeneracy, yet their most powerful appeal for vigorous action has ever been through becoming the starting point of some deadly epidemic. Disease is the revenge which the submerged tenth takes on the careless selfishness of the upper social strata. As long ago as 1838 a serious outbreak of disease in London, beginning in the east end, inspired an extensive investigation into the conditions of life in certain districts, the report of which came like a revelation to the rest of the city. Nearly 1,500 families were found living in 2,200 rooms and with only 2,500 beds among them, 923 of them having only one room and 625 only one bed. What this means as to the possibilities for health and decency needs no explanation.

For many years a vigorous campaign has been waged against the London slum. Some of the worst, like the notorious Seven Dials, have been practically wiped out of existence by driving broad streets and avenues through them, and thus letting air, sunlight and a better class of buildings penetrate the whole neighborhood. In others, like the Boundary Street area in Bethnal Green, the old buildings were torn down block by block and new model tenements erected in their place. The last of these buildings were dedicated by the Prince of Wales in 1900, and the whole series form a unique tenement village, covering thirteen acres, and with accommodations for 6,000 people, ingeniously grouped around parks, playgrounds and public baths. The death rate of the old district was 26 per 1,000; that of the new village does not exceed 16.

The problem is, however, in some ways simpler in London than in New York, since the slum buildings are mostly old tumble-down two-story or three-story or even cottage-built hovels, whose condemnation and destruction cost little in addition to the ground values, and as there has long been a provision in the building laws restricting the height of any building to two-thirds of the width of the street on which it faces, and strict regulations as to the cubic space per inhabitant, air and light are now enforced, and the evil is not perpetuating itself as in Manhattan Island. It is merely a question of destroying that which is already beginning to decay.

Certain it is that the London slum is rapidly becoming a *rara avis*, which must be sought for diligently if one would find it, and experienced workers go so far as to declare that even at its worst it is a "Garden of Eden" compared to the New York variety. The two forces which have mainly contributed to this desirable condition of affairs have been intelligent legislation as to light, air-space, plumbing, etc., and the discovery, through the erection of model buildings, as a work of philanthropy, especially the famous Peabody Fund, that this class of tenements could actually be made a paying investment. The original gift of this great philanthropist was $2,500,000, with which eighteen separate blocks of buildings were erected in various parts of the city, and such rents fixed as would secure a return of 3 per cent. on the investment. This is returned to the fund, so that it is continuously renewing itself and new buildings are steadily being constructed. As an endless chain of beneficence, this donation is certainly unsurpassed in the annals of charity.

Other examples might be cited to show that the medical profession, as sanitary reformers, is entrenched in a perfectly impregnable position as to its right to say to a prospective builder, "You must conform to such and such requirements for health and safety," inasmuch as it has been abundantly shown that this can be done without depriving him of a legitimate profit on his investment. This is the line which has been followed by the Tenement House Commission in New York appointed by President Roosevelt when he was governor. From this point of view, all that is needed in the future is a firm stand, rigorous and intelligent, holding tenement-house builders and investors to a certain standard of lighting, space and ventilation.

Of course, there will be a furious outcry from the unscrupulous class of builders and investors—and they are exceedingly numerous, if not a majority—who are determined to get every inch of space and every dollar of rent that their building can be made to yield; but when the public opinion once knows that the insistence by the city on these sanitary requirements is merely a question of cutting down profits of 15, 20 and even 30 per cent. per annum to the more reasonable 6, 7 or 10 per cent., it will stand no trifling with such serious conditions and will crystallize into a sentiment which even city councils must respect.

The other factor which is operating so powerfully in the solution of this problem, is that of rapid and cheap transportation. Steam made an enormous improvement and electricity has increased it 100 per cent., and is apparently not much more than at the threshold of its achievements in this regard.

We as reformers may, we believe, look forward confidently to a time when no more than a certain degree of density per acre of population will be tolerated in any of our large cities. While the skyscraper continues to flourish apace, the central parts of our cities will become more and more exclusively devoted to business

purposes and their only inhabitants after business hours will be the few janitors, caretakers and watchmen, with their families, required to protect from fire and loss. Indeed, the London County Council has already begun to recognize this principle, and to discourage the building of even model tenements for laboring men within the more congested districts. In their place it is now carrying out a broad and far-seeing scheme of suburban colonization, building instead of model tenement blocks with their hundred rooms to the acre, acres of model cottages out in selected suburbs, making at the same time special arrangements with the railway and electric companies for reduced rates of transportation for their tenants. We may, perhaps, even look forward to a Utopia in which the awful effects of overcrowding in city life will be confined entirely to men of adult age and during business hours only, and when women and children will escape them entirely—living out in beautiful model suburb homes. The gain in health, in happiness, in home life and in facilities for healthful and natural education for the children will be something enormous.

The same principle may of course be carried out in our American cities. Indeed, they are already being applied in a large majority of them, without any official interference on the part of the municipal authorities. In our American cities the classic jibe of Thackeray at Washington, "a city of magnificent distances," is one of their proudest boasts. In one of them, however, and that the largest—New York—the problem presents itself in an even more acute and difficult form than in London. Not only has it, as has already been mentioned, worse slums than any to be found in the world's metropolis, but from the peculiar geographic formation of Manhattan Island, the solution of the problem, by means of rapid, cheap and safe transportation into the surrounding suburbs, is peculiarly difficult. Now, however, that the proposal for the great Pennsylvania tunnel has been accepted, giving it direct communication with the mainland on one side and Long Island on the other, we may hope for the beginning of better days.

THE SIGNIFICANCE OF ALBUMIN AND CASTS IN SURGICAL PATIENTS.

There has been a belief among surgeons for many years that ether is so irritating to the kidneys that it should not be used with patients suffering from nephritis. Some advocates of chloroform consider the irritating effects of ether great enough even to cause nephritis in patients with kidneys normal before operation. As with many other beliefs we doubt if most of those who have held them could give their reasons for doing so. Probably a statement which has been made in standard text-books on therapeutics in several successive editions is partly responsible for this somewhat widespread opinion. These books state that chloroform is more irritating to the kidneys than ether, but the large quantity of the latter necessary for anesthesia makes it less safe. No facts are given on which to base this statement.

In a paper read recently by Dr. John C. Munro,[1] is contributed some valuable information on this subject based on the records of 4,185 cases treated in the surgical wards of the Boston City Hospital. Albumin and casts were found in the urine of 500 cases admitted within three years. From this number are excluded patients obviously suffering from renal degeneration. Practically every form of injury and disease are included in the series, the majority being of a serious nature. At least 60 per cent. underwent operation; about 12 per cent. suffered from fracture, and in many cases the etherization was of long duration. The cause of the frequent occurrence of albumin and casts, affecting approximately 35 per cent. of all surgical cases, is difficult to determine. The use of alcohol, insufficient or improper food and hard work are mentioned as possible causes. Unhygienic surroundings and improper clothing are probable factors in children. In a number of septic cases the renal disturbance subsided as soon as drainage was established by operation. The recoveries were quite satisfactory in 437 of these patients, there being no complications for which there was not adequate explanation on grounds independent of any kidney lesion. Among 63 cases that died, with 2 exceptions, the conditions found at postmortem examination did not give any weight to the urinary conditions as a cause of the fatal result. Munro concludes that we should expect evidence of renal irritation in over one-third of the surgical patients in a municipal hospital. A trace of albumin with or without hyaline and granular casts, unattended by any other evidence of renal damage, should not influence the prognosis in surgical disease or operation. The proportion of patients thus affected in young and otherwise healthy children is probably as great as in adults. The presence of albumin and casts should lead us to watch for other signs of organic degeneration which might unfavorably influence operation or recovery. Albumin and casts alone he does not consider a contraindication to the administration of ether.

This subject seems to us of great practical importance for everyone called on to administer an anesthetic, no matter how infrequently. The greater relative safety of ether as a general anesthetic at the time of operation is becoming more and more generally acknowledged. Prejudice has much to do with our beliefs in such matters, and until some of the older generation of surgeons die there will be a considerable number who will adhere to chloroform as the best general anesthetic. This is particularly true of the surgeons of Great Britain and Germany. Many of these mention the dangerous after-effects on the kidneys and lungs as the factors which keep them from using ether, though they admit it is safer at the time of operation. What we

1. Transactions Amer. Surg. Assn., 1903.

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want is definite information as to whether these dangerous after-effects really do or do not occur, and by the careful study of so large a number of cases Munro has done much to settle the question so far as the kidneys are concerned. In this, as in many other matters in surgery, there has been too great a tendency to depend on general impressions rather than to seek for definite information by careful study of clinical material.

DEPRESSANT DRUGS AND SUDDEN DEATHS.

It is very interesting to examine the statistics of sudden death from heart disease in New York City during the last three years. In 1900 there were registered 4,069 deaths from heart disease in the greater city of New York in a population of approximately 3,445,000, while in 1901 there were 4,626 such deaths, the population having presumably increased about 100,000. Thus there was an increased ratio of sudden deaths to population. In 1902 the number of sudden deaths reported from heart disease had increased still further to 5,461. Calculating the percentages of sudden deaths from heart disease to population, allowing for the before-mentioned increase of population, the deaths of this kind to each thousand were, in 1900, 1.18; in 1901, 1.31; in 1902, 1.34.

For the year 1903 there was a decrease in the number of deaths from this cause, so that the ratio was only 1.28 per thousand. There has been some discussion among sanitarians and public-health officials as to the reason for this decrease. A portion of the decrease has been ascribed definitely—and with considerable plausibility—to a certain cause. At the beginning of last year the board of health, suspecting that many prescriptions for phenacetin were being filled by druggists with acetanilid, or with a mixture of phenacetin and acetanilid, sent inspectors to obtain definite information on this matter. Altogether 373 samples of phenacetin were bought from the same number of drug stores in various parts of the city, phenacetin being specially asked for and in some instances even obtained, on a physician's prescription. Of the 373 samples, 58 were pure phenacetin; 315 were adulterated with cheaper drugs, mainly acetanilid, and in 267 cases containing more acetanilid than phenacetin; 32 samples were pure acetanilid. The commissioner made these facts public, and threatened to expose and prosecute all druggists who would hereafter be found committing this misdemeanor.

It is very interesting at least to find that a single year after the investigation and supposed consequent reform on the part of the dispensing pharmacists, there should be a slight reduction in the actual sudden death rate from heart disease, and that at a time when for many years there has been a constant increase in the death rate from this cause. It is well known that acetanilid is a distinctly depressant drug for the heart. Professor Jacobi of New York always insists that it is an actual tissue poison, to be used only with great care, and many therapeutists teaching that it is the underlying cause for the increase in reported sudden deaths that has occurred in recent years.

This question of the evil of depressant drugs is all the more interesting because of the freedom with which so-called headache powders, mainly composed of acetanilid and other heart depressants, are now so commonly bought and sold. Many women, and even men, think nothing of stepping into a drug store and asking for something for a headache. The headache powders that are dispensed to them so freely always contain acetanilid, and great harm is being done in this way. It is probable that a similar investigation in other cities of the country might also furnish instructive facts. Certain it is that proper legal regulation of the sale of such depressant drugs, so that they could not be dispensed except under the direction of a competent physician, would in the long run have a beneficial effect on the sudden death rate from heart disease. This cause of sudden death is becoming more frequent in this country, and is a serious menace for those suffering from even slight forms of heart disease if they are so foolish as to take these remedies.

ARTIFICIAL CAMPHOR.

Prior to 1828 chemists made a sharp distinction between organic and inorganic compounds, it being supposed that the latter are capable of preparation in the laboratory, while the former are formed only in the living organism, animal or vegetable, under the influence of a particular force—the life force. This view was rendered untenable by Wohler's discovery that urea, a typical secretion of the animal organism, can be prepared synthetically from cyanic acid and ammonia, two inorganic compounds. Many other "organic" compounds, such as acetic acid, lactic acid, glycerin and sugar have since been made synthetically, and as our knowledge of chemistry increased the old idea about a vital force has lost greatly in significance. We know now that the same chemical forces act both in the organic and inorganic worlds. It is well known that most of the vanilla extract now found on the market is not derived from the vanilla bean, but from coal tar. This coal tar furnishes a large number of other substances which are used in medicine and in the arts. Among these may be mentioned the various analgesics, anilin dyes and perfumes. Indigo and alcohol have also been made from their inorganic constituents, and recently chemists have discovered a method of making camphor synthetically, which makes the manufacture of this substance a profitable industry. Camphor has the formula $C_{10}H_{16}O$, and is an organic compound which was formerly derived only from the camphor-tree *Cinnamomum camphora*, by distilling the chips with water and purifying the product by sublimation. The camphor trees have, however, been growing scarce, and as a result the price of camphor has of late been very high. Japan has a monopoly on the natural product,

but this monopoly has now been broken by the manufacture in this country of artificial camphor from turpentine. Turpentine has the formula of $C_{10}H_{16}$ and can be oxidized to $C_{10}H_{14}O$ by heating it with oxalic acid. A ton of turpentine is heated at one time with a quantity of oxalic acid, and out of this mixture is distilled the purest variety of camphor. It takes fifteen hours to complete a lot, and the yield of camphor is 25 to 30 per cent. of the weight of turpentine.[2] Various other valuable oils are obtained at the same time as by-products.

THE ETIOLOGY AND PATHOGENESIS OF AORTIC ANEURISM.

Once developed, there seems to be little hope for cure of aneurism of the aorta. Amelioration may be afforded, perhaps for a long period, by the introduction of gold wire and the passage of a galvanic current, and some good results have been reported from the use of gelatin subcutaneously. The prognosis is, however, never encouraging, and more is to be hoped for, in this instance, as in many others, from prophylactic measures rather than the treatment of the developed condition. Of the various causes that have been held responsible for aortic aneurism, by far the most important is syphilis, and the recognition of this fact means that the physician especially must do all in his power to prevent the spread of this disease, and to insist on its thorough and long-continued treatment when it occurs. Modern medicine is preventive medicine. Dr. Hans Arnsperger[1] has analyzed 37 cases of aneurism of the aorta—35 in men and 2 in women—observed at the Medical Clinic of the University of Heidelberg in the service of Professor Erb, not including 15 presenting merely dilatation of the aorta. Of the 35 cases in men, 15 were instances of diffuse and 20 of circumscribed aneurism, insofar as could be determined by physical examination without autopsy. Of this entire number a history of syphilis was obtained in 65.7 per cent. of the cases—in 48.6 per cent. with certainty and in 17.1 per cent. with probability; of the cases of diffuse aneurism a history of syphilis was obtained in 26.6 per cent.—in 20 per cent. with certainty and in 6.6 with probability; and of the cases of sacculated aneurism a history of syphilis was obtained in 95 per cent.—in 70 per cent. with certainty. As a result of these observations and of a study of the views of others on the same subject, it is pointed out that clinical-statistical investigation discloses with certainty that, in an exceedingly large proportion of cases of aortic aneurism, a history of syphilis can be obtained, while all other factors admitted to be of etiologic significance are demonstrable in only a small percentage. The conclusion seems, therefore, justified that syphilis is the most important factor in the etiology of aortic aneurism. Pathologic-anatomic investigation shows that the changes found in cases of aortic aneurism generally correspond to those observed in cases of syphilitic disease of the aorta. The alterations exhibit no certain, pathognomonic feature, but they conform with those recognized as certainly syphilitic. The findings suggestive of traumatism, such as primary rupture of the elastic coat, are in large part based on error. Experimental investigation teaches that inflammatory processes induced artificially may result in the development of aneurism, but these can not be caused by traumatic effects on the walls of the vessels, or only as a transient phenomenon. All of these considerations would seem to justify the conclusion that aortic aneurism is, in the overwhelming majority of cases, due to inflammatory processes in the wall of the aorta and that syphilitic disease of the vessel-wall plays a particularly important part in the etiology and pathogenesis of aortic aneurism.

1. Deutsches Archiv für klinische Medicine, vol. lxxviii, Nos. 5-6, p. 387.

FERTILIZATION AND THE PRODUCTION OF SEX.

The production of sex was recently discussed editorially[1] and some recent studies of the subject noticed. Still another memoir bearing on the subject is that of Schuecking[2] which, however, covers a wider biologic range of study and includes a consideration of the essentials of fertilization as they occur both in the lower organisms and in the human species. A certain portion of Schuecking's experiments on the artificial fertilization of certain marine organisms was noticed in a former issue[3] of THE JOURNAL, but more recently he has published some interesting and perhaps important deductions. He finds that the taking up of water is a preliminary essential for both artificial fertilization and parthenogenesis and that fertilization is more certain the larger the number of spermatozoa. It is rather incomprehensible why so large a number should be required—some two or three hundred millions—when but a single one is sufficient for fertilization, and he thinks he finds an explanation in his observation. The excessive number appears to increase the protoplasmic excitation and water inbibition, thereby to overcome the acidity of the secretions of the parts which are increased (in the human species) from the close of one menstrual period to another, and it is only in this way that conception is able to take place. Assuming that the sex is established in the ovum before conception, which certain facts seem to indicate—such as the similarity of sex from single ovum twins—and which has been demonstrated in some of the lower animals, he holds that the female ovum requires a much larger quantity of water to start its development than does the male ovum and thus explains certain facts, such as the increase of male children after a war when oligospermia may be assumed to exist. The facts suggest that sterility might be combated by a preliminary injection of weak alkaline fluids together with massage of the pelvic organs after deposition of the semen. Schuecking's deductions are certainly suggestive as regards not only the mechanism of fertilization, but the question of the production of sex which is so much to the front of late years.

1. THE JOURNAL A. M. A., Dec. 26, 1903, p. 1578.
2. Article read before the Naturforscher Congress at its seventy-fifth meeting in Cassell and published in the Klinisch-therapeutische Wochenschrift, November 29.
3. THE JOURNAL A. M. A., vol. xl, p. 694.

Medical News.

GEORGIA.

Still More Smallpox.—It is reported that there are at present from 15 to 20 cases of smallpox among negroes at Stillmore.

Memorial to Dr. Gaston.—The Atlanta Society of Medicine at its last meeting adopted resolutions in memory of the late Dr. J. McFadden Gaston.

Cornerstone Laid.—The cornerstone of the New Hospital for Incurables, Atlanta, was laid with appropriate ceremonies, January 3. The building is expected to cost about $12,000.

Physician Shoots Physician.—Dr. Otis B. Sally, Augusta, was shot and seriously wounded by Dr. J. E. Durr, December 9. The cause is said to be professional jealousy. The bullet penetrated the apex of the right lung.

Election of Officers.—The Chatham County Medical Society held its annual meeting at Savannah, January 6, and elected the following officers: President, Dr. J. Lawton Hiers; vice-presidents, Drs. George R. White and Ralph M. Thomson; recording secretary, Dr. Ralston Larrimore; corresponding secretary, Dr. James O. Baker; treasurer, Dr. William J. Williams, and librarian, Dr. Alpheus B. Simmons, all of Savannah.

ILLINOIS.

Physician Injured.—Dr. Thomas B. Norvell, Peoria, was thrown from his sleigh, January 2, and injured his ankle.

Smallpox in Twenty Counties.—The State Board of Health reports the disease as present in 30 localities in 20 counties, with an aggregate of about 300 cases.

Physicians Shun Advertising.—Whiteside County Medical Society is reported to have adopted a resolution "requesting the newspapers to refrain from mentioning the names of physicians in connection with accidents or other cases where doctors are called."

Quarantine of Lemont Raised.—Lemont, which has been in strict quarantine since October 20, on account of epidemic smallpox, is now open to the world. None of the 380 cases was followed by death. The epidemic is now checked and the last of the affected are convalescent.

State Board Election.—At the annual meeting of the Illinois State Board of Health, held in Springfield, January 12, the following officers were re-elected: Dr. George W. Webster, Chicago, president; Dr. James A. Egan, Springfield, secretary, and Dr. James C. Sullivan, Cairo, treasurer.

Send in Large Bills.—The village health officer of Lemont, Dr. John A. Fitzpatrick, has rendered an account to the Board of County Commissioners of $5,820 for his services from October 20 to November 11. Dr. John J. Leahy presents his bill for $5,753. The president of the board asks, since each man asserts that he did the work, whether the county is liable for the payment of both bills.

State Board Inspections.—The inspectors who investigated the recent epidemic of typhoid fever at Canton discovered that the disease was caused by the use of water from a polluted well. The well was closed, and no original cases have since developed.——In Pontiac the water supply was found to be slightly polluted, and the local board was directed to order the removal of an intake which was found to be the source of the trouble.

Chicago.

Superintendent from Minnesota.—Presbyterian hospital has secured for superintendent Dr. Arthur B. Ancker, St. Paul, who has been for several years superintendent and physician and surgeon in charge of the City and County Hospital, St. Paul.

Postmortem Award.—A suit begun a long time ago by Dr. Emma N. Warne, against the estate of Francis T. Wheeler, for $50,000, has been decided in favor of the plaintiff, who is now dead, and the amount of the award, $12,500, has been paid to her estate.

Deaths of the Week.—During the week ended January 9, 516 deaths occurred, 88 less than the preceding week, and 100 less than the corresponding week of 1903. Pneumonia still leads with 114 deaths, next coming in order, tuberculosis, with 44, violence with 39, and Bright's disease with 36.

Increased Longevity.—The department of health draws the following deductions from the statistics of deaths in Chicago last year:

The aggregate ages of the 28,853 decedents of 1903—exclusive of the theater-fire victims, not yet reported to the department—total 910,982 years, or an average of 32.1 years each. In 1892 the average was 22.6 years each, in 1882, 19.5; in 1872, 15.2. These figures show an increase in the average duration of human life in Chicago in less than a single generation—thirty-one years—of 111 per cent., or of more than double in 1903 that of 1872. In 1903 the average age at death was 42 per cent. greater than in 1892; 60 per cent. greater than in 1882, and, as already said, 111 per cent. greater than in 1872.

Three Chicago Colleges Debarred.—The Wisconsin Board of Medical Examiners decided, January 12, not to accept as evidence of ample medical training the diplomas of Harvey Medical College, National Medical University and Jenner Medical College, all of Chicago. The ground for the action is stated to be that the courses of study in those institutions do not come up to the standard adopted as the minimum by the Wisconsin board. Other schools that are deficient are to be removed from the accredited list. The board is also about to prosecute a number of unqualified practitioners in the state. The president of Harvey Medical College is reported in the Chicago *Tribune*, January 13, to have stated in an interview in defense of the graduates of that college:

In the ten years of our existence, among the hundred graduates we have sent out, only two have failed to pass the state examinations creditably, and those two men both failed in Wisconsin. They went through Harvey, however, before we had our modern equipment.

We are afraid that the president of Harvey College was misquoted, or possibly she has not followed the results in all states. From our records we find that outside of Illinois, only 8 Harvey graduates have appeared before the various licensing boards whose records we have published, and of these 4 passed and 4 failed, a percentage of failures of 50 per cent. The failures were as follows, one in Wisconsin, January, 1902, and one in April, 1902; one in Idaho, in April, 1903, and one in Wisconsin in July, 1903. All of these failures were of the class of 1901. It would seem that the Harvey graduates as a rule stay in Illinois, for our records show that the Illinois board has licensed from July, 1902, to July, 1903, inclusive, 34 holding diplomas of that school, and rejected none.

INDIANA.

Measles Epidemic.—At the Indiana Institution for the Deaf, Indianapolis, 81 out of the 340 inmates are ill with the disease.——The epidemic in Norwood is unabated, 63, or about one-eighth of the population, are ill.——At St. Joseph's Orphan Asylum, La Fayette, 87 out of 157 are ill with measles.——Up to January 6, 244 cases had been reported to the Indianapolis Board of Health.——At a school in Trafalgar, 18 out of 20 pupils have the disease.

Personal.—The venerable Dr. William H. Wishard, who has practiced for 64 years in Marion County, was elected president of the Indianapolis Medical Society, January 5.——Dr. William Flynn, Marion, has been seriously ill with pneumonia.——Dr. Samuel Brown, New Bethel, is seriously ill.——Dr. Alembert W. Brayton, Indianapolis, has recovered from his recent illness.——Dr. Stanley W. Edwins, Elwood, is dangerously ill.——Dr. Isaac N. Trent, Muncie, has been elected second vice-president of the state medical society.

Disease and Death in November.—The monthly statistics of the State Board of Health show that bronchitis was the most prevalent disease in November, and tonsillitis the next prevalent. Pneumonia was more prevalent than in the same month last year, the deaths being 241 and 181 respectively. The total number of deaths reported was 2,518, an annual rate of 12.2 per 1,000. In the corresponding month last year 2,408 deaths were reported, which is a rate of 11.6 per 1,000. The city death rate during the month was 15.5, which is 3.3 higher than the state rate for the same month. In the corresponding month last year the rate was practically the same as this year. The country death rate is 10.4. In the corresponding month last year it was 9.7. In November 324 cases of smallpox occurred in 33 counties, with one death. It is a singular coincidence that exactly the same number of cases was reported in October, and also the same number of deaths. In the corresponding month last year, there were 441 cases, with two deaths, and 40 counties were invaded. The tuberculosis deaths numbered 279, a rate of 135.2 per 100,000. The same month last year the deaths numbered exactly the same, another remarkable coincidence. Of the total deaths from consumption, 146 were females and 133 males; 28 of the males were married and between the ages of 18 and 40, and they left 56 children under the age of 12; 60 of the females were married and between the ages of 18 and 40, and left 120 children under the age of 12. Typhoid fever caused 105 deaths. The death rate from this cause for the whole state was 50.9 per 100,000. The city rate was 447; the country rate 54.4. Pneumonia deaths numbered 241, a rate of 116.8 per 100,000. In the corresponding month

last year the rate was 87.7. The disease prevailed very much more extensively in the cities than in the country, the rates being respectively: city, 179.1 per 100,000; country, 84.5. Pneumonia does not lead consumption as a cause of death in Indiana, and has only done so in one or two months in the last four years. The violence deaths numbered 163. Of the violent deaths 4 were murders, 27 suicides and the rest accidental; 9 of the suicides were females, and chose the following methods of self-destruction: Drowning, 1; morphin, 3; carbolic acid, 3; other poisons, 2. Some of the causes of accidental deaths were: Railroads, 23, 2 of them being females; burns and scalds, 27, 16 being females; fracture of skull 11, all males; fracture of femur or other bones, 11, 7 being females; accidents in mines, 3; electricity, 1; horses, 3, and explosions, 2.

KENTUCKY.

College Incorporated.—The Louisville National Medical College Company, which conducts a medical college for colored students, has been reincorporated with a capital stock of $12,000.

Acquitted.—Dr. W. Dallas Richards, Dayton, accused of having violated a city ordinance by failing to report a case of diphtheria and to placard the house, has been acquitted after a trial by jury.

Smallpox.—There are six cases in and near Burgin.——Several severe cases are reported from Webster County.——On account of the prevalence of the disease in Hart County, grand and petit juries have been dismissed.

Personal.—Dr. Alexander Bailey, Flagfolk, has been appointed second assistant physician at the Eastern Asylum for the Insane, Lexington.——Dr. S. Scott Prather, Louisville, is seriously ill with typhoid fever.——Dr. James M. Holloway is critically ill with kidney disease at his home in Louisville.——Dr. Cleva C. Owens, Frankfort, has been appointed first assistant physician of the Central Asylum for the Insane, Lakeland.——Dr. James W. Hill, Bardstown, has been appointed superintendent of the State Institution for Feeble-Minded Children, Frankfort.——Dr. J. R. M. Dillon, Paducah, has moved to New Orleans.

LOUISIANA.

Quarantine Laws.—The State Board of Health met yesterday to consider requirements for land quarantine as a protection against the importation of yellow fever from western sources of contamination. No rules will go into effect until after a conference with the health authorities of Texas.

New Orleans Pasteur Institute.—The organization of the Pasteur Institute has been completed and the institute was formally turned over to Charity Hospital, January 4. It is now ready for the free treatment of every citizen of the state suffering or supposed to be suffering from this disease.

In Favor of Tulane.—The Louisiana Supreme Court has decided in favor of Tulane University the first and most important of two contests to the Hutchinson will. Eight hundred thousand dollars was left to the university to be used for its medical department for specified purposes. The first contest was as to the validity of the will and the second was as to whether the university could act as trustee for one of its departments. The second contest on the decision has not yet been rendered.

Change of Meeting-Place.—The Louisiana State Medical Society has changed its meeting place for 1904 to New Orleans. The remarkable increase in the size and activity of the state society promises such an unusually large meeting that those in charge of affairs at Lafayette feared that it would be impossible for them to accommodate properly the large number expected. The Orleans Parish Medical Society immediately extended a cordial invitation, and is vigorously pushing preparations for the largest and most successful meeting the state society has ever had.

MARYLAND.

Personal.—Dr. Josiah S. Bowen, Mt. Washington, sailed for Europe, January 2.

Smallpox.—There is a case of smallpox at Mt. Pleasant, Frederick County, contracted, it is believed, from a man who died from the disease, December 31.——At Oakland there are 12 or more cases, all under strict quarantine.——A suspect is under quarantine at Sang Run.——At Loch Lynn Heights the quarantine was raised January 4.——It is reported that smallpox has broken out among the colored people near Ellicott City. The two physicians who saw the cases, some 20 or more, pronounced them respectively chicken-pox and smallpox; Dr. John S. Fulton, secretary of the State Board of Health, decided in favor of genuine smallpox.

Baltimore.

Deaths and Births.—The week ended January 9 there were 235 deaths and 294 births reported. The annual death rate was 21.82 per 1,000, namely, for whites 18.86, for colored 39 per 1,000. Among causes of death were consumption 39, pneumonia 32, cancer 12, Bright's disease 10, diphtheria 5, and typhoid fever 3.

Hospital Report.—At the Presbyterian Eye, Ear and Throat Charity Hospital, 11,944 patients were treated during the year. One thousand dollars was expended out of the endowment fund for improvements. Of the cases treated 7,419 were eye cases, 2,042 ear cases, and 2,383 nose and throat. The daily average was 111. The treasurer reported a balance on hand of $1,528. Dr. Francis M. Chisolm was re-elected secretary of the board.

Personal.—Dr. Howard A. Kelly returned January 7 from a trip to Florida. His time there was spent in hunting and fishing. He attended a Spanish dinner given by the physicians of Tampa.——Dr. John B. Deaver, Philadelphia, will deliver the annual oration before the Medical and Chirurgical Faculty of Maryland in April.——Dr. Morris C. Robins, formerly associate professor of clinical medicine in the University of Maryland, has removed to Spokane, Wash.

Tuberculosis Exposition.—The Tuberculosis Exposition will open in McCoy Hall, Johns Hopkins University, January 25. The opening meeting will be held at 8 p. m. Prominent officials of the state and city will be present, including Governor Warfield and Mayor McLane. The orator of the evening will be Dr. Edward L. Trudeau, Saranac, N. Y. At 5 p. m. daily thereafter there will be lectures on various aspects of the tuberculosis problem, the lecturers being Dr. Mazyck P. Ravenel, Philadelphia; Dr. S. A. Knopf, New York; Mr. Frederick Hoffman, Newark, N. J.; Mr. Ernest Poole, New York; Dr. Vincent Y. Bowditch, Boston; Dr. George J. Adami, Montreal, and Dr. Lawrence Flick, Philadelphia.

Report of Hospital for Insane.—The Shepherd and Enoch Pratt Hospital for Mental and Nervous Diseases has issued its twelfth annual report. At this time 104 patients remained under care. There had been received new cases 120, and 114 discharged. Of the latter 20 were recovered and 48 improved. The trustees admitted all cases recommended by the staff as probably curable. About 15 per cent. of the 104 patients were treated free, and only 18 per cent. paid the average cost and over. With the exception of expenditures for needed buildings and repairs, the entire income was expended for the benefit of the hospital inmates. The laboratory has been enlarged and furnished with additional appliances, and the most advanced methods of investigation are there pursued. Of those admitted during the year, 58 were men and 62 women, of whom 19 men and 21 women were discharged unimproved, and one man and three women died.

MASSACHUSETTS.

Glanders on Increase.—Sixty horses were quarantined in Cambridge during 1903 for glanders, and of these 54 were shot. This is an alarming increase in the prevalence of the disease.

Deaths of 1903.—Boston's death rate for 1903 is lower than usual, being only 17.70 per 1,000. The total number of deaths was 10,840, 343 less than in 1902. During the year 68 cases of smallpox with 13 deaths occurred in the city.

Asphyxia for Criminals.—Dr. Francis A. Harris, medical examiner for Boston, has written a letter to the public press advocating the substitution of some less "cruel and unusual" method of inflicting the death penalty than electrocution and suggesting the administration of carbon-monoxid to the criminal already in a narcotic sleep.

Popular Medical Lectures.—Public interest in things medical in Boston is shown in the course of lectures being given at the Lowell Institute on "Bacteriology" by Dr. Harold C. Ernst of Harvard Medical School, twice a week for four weeks; and by the lecture on "Consumption" before the Twentieth Century Club by Dr. S. Adolphus Knopf, New York City.

Business Before Health.—The Board of Health of Melrose has resigned, giving as a reason that they need more time for their own business. They have encountered sharp criticism since the smallpox epidemic last year, when they insisted on vaccination and the most thorough isolation and inspection. The board consisted of Drs. Paul H. Prorandie and John T. Timlin and Mr. J. H. Robinson.

Brigham Bequests Benefit.—The following hospitals among 21 charitable institutions received their annual gift of $1,000 from the Brigham Hospital Corporation: Massachusetts Char-

itable Eye and Ear Infirmary, Channing Home for Consumptive Women, Children's Hospital, Massachusetts Infant Asylum, Boston Home for Incurables, New England Hospital for Women and Children, and the Boston Lying-in Hospital.

Children Thrive in New Home.—The annual meeting of the corporation of the Convalescent Home of the Children's Hospital in Boston, which has been so crippled the past year by fire, while seeking the erection of a new building to accommodate 100, reports a marked success in its new building, where children receive the radical fresh-air treatment for tuberculosis. It is believed this is the first such building in the country, and the eight children there already show improvement in these few weeks.

Insane Hospital Crowded.—The fire at the Taunton Insane Hospital, where fortunately there was no loss of life, has called the attention of the public to the very crowded condition of the state insane hospitals. More than 8,500 people are cared for, and there is an increase of over 400 each year. There are sleeping accommodations for only about 7,400, so that 1,100 have to sleep on cots in corridors. In many buildings this is unsafe, hence the urgent demand of the officials this year for funds which will provide new buildings for at least 600 patients. During the past three years additional facilities have been provided by the state at Westboro for 350; at Taunton, 110; at Northampton, 200; at Danvers, 300; at Worcester, 150, and at Medfield, 170. All these hospitals are also establishing colonies which it is hoped will relieve the pressure somewhat. Beginning this year the state assumes the care of all the insane within its borders. This includes Boston, which city will, however, continue its own institutions and receive from the state a per capita amount. This means an annual additional expense to the state for care alone of $1,100,000.

MISSOURI.

Personal.—Dr. Charles H. Wallace, St. Joseph, has been appointed chief surgeon of the St. Joseph and Grand Island Railway, vice Dr. Daniel Morton, resigned.——Dr. William W. Macfarlane, Mexico, has been re-elected surgeon-in-charge of the Ex-Confederate Home at Higginsville.——Dr. Asbury M. Crow, Kansas City, is critically ill.——Dr. Melvin W. Caster, Clayton, has been taken to the Missouri Baptist Sanitarium.——Dr. Harry E. Ferrel, St. Louis, assistant surgeon of the First Missouri Infantry, has resigned.——Dr. Edward C. Runge, superintendent of the St. Louis Insane Asylum, has resigned, to take effect February 1.

Societies Elect Officers.—BUCHANAN COUNTY MEDICAL SOCIETY.—At the annual meeting held in St. Joseph, December 16, the following officers were elected: Dr. William T. Elam, president; Dr. John B. Reynolds, vice-president; Dr. Joseph J. Bansbach, treasurer; Dr. Charles W. Fassett, secretary; Dr. Thompson E. Potter, censor, and Dr. O. Beverly Campbell, delegate to the state association.

ST. LOUIS COUNTY MEDICAL SOCIETY.—At the annual meeting held in Clayton, December 9, Dr. Roy D. Moore, Central, was elected president; Dr. Howard Carter, Webster Groves, vice-president, and Dr. Harry G. Wyer, Kirkwood, secretary.

ST. LOUIS MEDICAL SOCIETY OF MISSOURI.—The following officers were elected at the annual meeting, December 28: President, Dr. Benjamin M. Hypes; vice-president, Dr. Henry C. Dalton; recording secretary, Dr. T. Andrews Hopkins; corresponding secretary, Dr. Henry J. Scherck, and censors, Drs. Elisha H. Gregory, Robert C. Atkinson, and Paul Y. Tupper.

NEW YORK.

Compulsory Vaccination.—The board of health of Jamestown required all children in public and private schools to be vaccinated before re-entering school after the Christmas vacation.

Medical Mayors.—Dr. Eugene Beach has been elected mayor of Gloversville. Dr. Beach is also a member of the State Board of Medical Examiners.——Dr. Edward F. Brush has been elected mayor of Mount Vernon.

Drugs Are Poor.—At the State Board of Pharmacy meeting the committee on adulteration and substitution of drugs reported that of 976 samples tested in the state 415 were found to be below the standard. The number of samples taken from the New York City drug stores was 871, of which 310 were found to be impure or substituted drugs.

Smallpox Spreads.—Smallpox continues to spread in Tonawanda, so that all the public schools are closed until further notice. The health board has also passed a resolution requesting the council to raise $4,000 to fight the disease.——In Buffalo the disease is well under control, and no new cases are reported.——Dr. A. C. Wilding has been directed to investigate the epidemic of smallpox in Chautauqua and Allegany counties.

New Cocain Laws Needed.—To check the cocain and morphin habit the State Board of Pharmacy has decided to recommend to the legislature the enactment of a law prohibiting the sale of these drugs on old prescriptions, or what are known as "repeaters." The sale is to be restricted to prescriptions of physicians and dentists, only one sale to be made on each prescription. The cocain habit is growing so rapidly that many pharmaceutic associations in the state have urged the importance of a state law to lessen, if not entirely stop, the sale of the drug to habitual users.

Buffalo.

New District Physician.—Dr. George Westinghouse is now district physician, succeeding Dr. Eugene C. Waldorf.

Seneca Hospital Report.—The twelfth annual report of the Charity Eye, Ear and Throat Hospital shows 1,507 new cases treated, and 7,611 old patients. Since the opening of the hospital 20,639 patients have been treated.

State Hospital Report.—The Buffalo State Hospital has issued its thirty-second annual report covering the year ended Sept. 30, 1902. The total number of patients treated during the fiscal year was 2,296, of which 1,059 were men and 1,237 women. It will be necessary to enlarge the hospital, as it is now filled to its utmost capacity.

New York City.

Personal.—Dr. Samuel Alexander, professor of genito-urinary diseases, has obtained a leave of absence on account of sickness, and this year the lectures on the surgery of the genito-urinary tract will be given by Dr. Charles L. Gibson.——Dr. A. D. Davidow has moved to Florida, N. Y.

Left Small Estate.—It will be a great surprise to many who knew the late Dr. Cyrus Edson, and had knowledge of the extent of his medical practice, as well as the amount of other work that he did, to learn that his estate amounted to only $4,000. It is but another example of the common lack of business ability among medical men.

Society Secures Permanent Quarters.—The Eastern Medical Society of New York has engaged permanent quarters at 151 Clinton Street, New York. The building will offer every facility of the modern clubhouse, all of which will be open to the members. A reference library is one of the projected features. At the annual election, held recently, the following officers were elected: President, Dr. Louis J. Ladinski; vice-presidents, Drs. David Robinsohn and Tobias Berger; treasurer, Dr. Joseph Barsky; corresponding secretary, Dr. Abraham L. Wolbarst, and recording secretary, Dr. Abraham J. Ronginsky. Dr. Wolff Freudenthal was elected trustee for three years. The chairmen of the new committees are: Committee on ethics, Dr. Adolph A. Himowich; committee on house, Dr. Ephraim K. Browd; committee on admission, Dr. John A. Price, and committee on library, Dr. Charles Rayevsky.

GENERAL.

Military Hospitals Wanted.—The Army Medical Department, in its schedule of desired appropriations amounting to $475,000, has the following: "A modern hospital of 100 beds to cost $100,000 at Fort Riley, a modern hospital of 24 beds to cost $30,000 at Fort Totten, N. Y., the enlargement of the hospitals at Fort Leavenworth, Kan., Fort Snelling, Minn., and Fort Sheridan, Ill., to cost respectively $45,000, $50,000 and $60,000.

Typhoid Fever Committee.—This committee of the conference which state health officers will hold with the U. S. Public Health and Marine Hospital Service has been appointed as follows: Dr. J. A. Egan, secretary of the Illinois State Board of Health, chairman; Dr. Samuel W. Abbott, State Board of Health of Massachusetts; Dr. William C. Woodward, health officer, District of Columbia; Dr. J. S. Fulton, State Board of Health of Maryland, and Dr. J. N. Hurty, State Board of Health of Indiana.

The Tuberculosis Congress Situation.—A meeting to discuss this situation will be held at 8:15 p. m., Jan. 28, 1904, at McCoy Hall, Johns Hopkins University, Baltimore, under the auspices of the Maryland Tuberculosis Commission. The meeting will be an informal one, and all American physicians and hygienists interested in the tuberculosis problem of this country are invited. The object of the meeting will be to form a national committee to represent the American medical profession at the International Congress on Tuberculosis to be held in Paris in 1905, and to discuss the announced Congress on Tuberculosis in St. Louis, and the other congress to be held in

Washington in 1905. It is to be hoped that the deliberations of this meeting will result in an understanding among all parties concerned, and that all individualism and partisanship will be supplanted by true love to humanity, by genuine scientific and practical methods, and by the highest professional motives. If it is the unanimous opinion of the medical profession that there should be an American Congress on Tuberculosis previous to the one which is to meet in Paris next year, it should be thoroughly representative and an honor to the American medical profession. Prof. Wm. H. Welch of Johns Hopkins has consented to preside. All communications relating to the meeting should be addressed to the secretary pro tem, Dr. H. Barton Jacobs, 11 Mount Vernon Place, Baltimore.

CANADA.

Grant to Victoria Order of Nurses.—The Civic Treasury Board of St. John, N. B., has made a grant of $1,000 to the Victorian Order of Nurses. In connection with this order in St. John there are two nurses who last year made 3,000 visits to the homes of the poor. The nurses never attend cases except when asked for by a physician.

Vancouver Physicians Want Health Officer.—The Vancouver Medical Association has expressed itself as in favor of a city health officer who should give all his time to the duties of that office and who should be a competent bacteriologist and be provided with the necessary outfit for making examinations. A committee is investigating the conditions in other cities before the matter is taken to the city authorities.

Montreal Health Statistics for 1903.—In Montreal, for the past year, the deaths numbered 6,941 as against 6,275 for 1902. According to the government census of Montreal, with which the health officer does not agree, the death rate for 1903 would be 24.22 per 1,000. According to the calculations of Dr. Laberge, the rate should be 21 per 1,000. The death rate during the summer was larger than during other seasons, owing to the heavy mortality among children. The medical health officer hopes to reduce this in future years by a better understanding among young mothers as to the care of their offspring, a purer milk supply and greater attention to the feeding of children.

The Physicians of New Brunswick and Vital Statistics.—We have mentioned the proceedings against the physicians of St. John, N. B., for not reporting births to the registrar. The counsel for the medical practitioners gives it as his opinion that the law is unconstitutional, and that the sole and exclusive right to legislate with reference to vital and all other statistical matters belongs not to the local legislature but to the parliament of Canada. When these acts were first passed they did not compel physicians to report. At the last legislature an amendment was made compelling physicians to make these reports with a number of details, and in default of same, after five days, a fine of $20 or imprisonment in the county jail.

Typhoid Epidemic in the Suburbs of Montreal.—Typhoid fever is epidemic in Westmount, St. Henry and Ste. Cunegonde, suburbs of Montreal, and the one thing which these municipalities have in common, which is not shared by Montreal, is the water supply. The character of this has been criticised severely for the past two years. In St. Henri there are nearly 300 cases, and in the others over 200. Physicians and nurses are overcrowded, and hospitals are said to be unable to care for more patients. In the Royal Victoria Hospital, Montreal, there are 40 cases; in the Hotel Dieu, 20 cases; in the General, 28; Notre Dame, 12, the great majority of which have been brought in from the infected districts. At the request of the municipality of St. Henri the Provincial Board of Health will make an analysis of the water. Dr. Laberge of Montreal states that he has been informed that many of the cases of supposed typhoid are cases of la grippe.

FOREIGN.

Prizes Awarded by the Paris Academie des Sciences.—Among the beneficiaries, the Paris professors, Albert Fournier and C. Richet received a $2,000 prize each, as also Prof. A. Monprofit of Angers. A woman, Miss Joteyko, received half of a prize of $260 for work on the nervous system. Two other prizes of about $200 were given to Arthus and V. Henri, and L. Damel for research in experimental physiology.

Legacy to Provide Medical Attendance for the Rich.—The will of a wealthy citizen of Montpellier, France, bequeathes a certain apartment building to the city authorities, the income from which is to be applied to the support of two young assistant professors—agrégés—who will treat all who apply, including and preferably the rich. The city authorities do not wish to undertake to supply medical care to the rich, and consequently do not know what to do with the bequest.

A Prophylactic Novel.—A French play was written a year or so ago which depicted the ravages of syphilis. It was entitled "Les Avariés" and, it is said, was written by Brieux in accordance with data furnished by Fournier. The public production of the play was prohibited by the censor, but this prohibition proved a great advertisement for the work, which was read extensively as the last sensation of the day, and was hailed by the profession as an important aid in the enlightenment of the public in regard to the dangers of venereal disease. A novel has recently been written along the same lines by Paul Bru, director of the Saint-Antoine Hospital at Paris. The theme is the sad fate of a bride infected by her husband's old and apparently insignificant gonorrhea. Pelvic lesions soon follow, compelling castration of the victim. In her horror at her unsexed condition she becomes insane. The title of the book is "L'Insexuée"—the Unsexed—and De Lavarenne recommends it as a touching work and a valuable contribution to the prophylaxis of venereal disease. In an editorial in the *Presse Médicale* he urges physicians to read the book so that they can commend it to their young male patients. The subject is handled as delicately as possible and appropriately for the general reader, but the possible evil consequences from an apparently trifling venereal disease are vividly portrayed. Brieux, the author of "Les Avariés," supplies a preface to the novel, and states in it that he considers gonorrhea as actually more dangerous than syphilis, as young men in their ignorance regard it so lightly.

LONDON LETTER.

The Oyster Problem.

We have alluded recently in THE JOURNAL to outbreaks of typhoid fever from sewage-contaminated oysters in London and other places. As a result of the last oyster scare the Fishmongers Company has assumed the responsibility of examining the beds from which the London market is supplied, giving a certificate of health to oysters considered beyond reproach. These certificates have been accepted as guarantees by the consumer. Such certificates were given only after grave consideration and examination of the beds by experts appointed by the company, who in many cases ordered the closure of beds. The company is now indignant because Dr. Klein, the city bacteriologist, has condemned as sewage polluted oysters to which the company had given a certificate. Most wholesale dealers take the precaution of obtaining a certificate of purity from independent bacteriologists.

Typhoid Fever from Water-Cress.

An outbreak of typhoid fever, which took place in June, in Hackney, a metropolitan borough, has been traced by the health officer to water-cress. The outbreak occurred in two waves. The first consisted of 48 cases, almost all within a circle of one-third of a mile radius; the second, of 62 cases within a circle of half a mile radius. None of the usual sources of infection, such as water, milk, ice cream and shellfish, could be traced. But the health officer was struck with the fact that in 64 cases in the first wave and in 55 per cent. of the second the patients had eaten water-cress during the three weeks before illness. He, therefore, caused 17 samples of water-cress taken from places where the patients marketed to be examined. All showed sewage organisms, and a sample of water taken from beds near the metropolis where some of the cress was grown contained at least 50 colon bacilli per c.c. The health officer consequently suggests that an inquiry should be made as to the conditions under which water-cress is cultivated.

The Polyclinic.

At the fifth annual dinner of the members and friends of the Polyclinic the chairman, Mr. James Cantlie, said that the attendance at the institution had been large and annually increasing. A new hospital is necessary.

Boldness in the Treatment of Heart Disease.

At the West London Medico-Chirurgical Society Dr. Alexander Morison advocated boldness in the treatment of heart disease, especially in young adults and in those in the prime of life in whom there is no evidence of vascular degeneration and whose reserve of force is commensurate with their development. He recommended the tincture of digitalis or the combined tinctures of digitalis and strophanthus in doses of 15 to 30 m. every four hours until a definite effect is produced on the action, force and capacity of the dilated heart. This may require the continuous administration of the drug until 200 or 300 m. have been taken. But before beginning this treatment the patient must be prepared. In suitable cases the surcharged venous system must be relieved by venesection to 4 to 10 ounces, the ede-

matous limbs drained by Southey's tubes or by incision, and effusion in the chest or abdomen removed as far as possible. For the treatment the constant supervision of skilled nurses is necessary.

Correspondence.

The Proposed National Bureau of Medicines and Foods.

SAN FRANCISCO, Jan. 7, 1904.

To the Editor:—Correspondence with the Joint Committee on a National Bureau of Medicines and Foods has developed several questions, one of which I should like to present through your columns for the purpose of eliciting suggestions. The question raised is as to the need for any such organization. There seems to be no dispute as to the truth of the fact that medicines and foods do not come up to fair standards of purity and identity. It is also agreed by all that many poor or worthless preparations of both pharmacopeial and extra-pharmacopeial preparations are on the market and are largely used. No one—especially no one in any way connected with medical journalism—has questioned the desirability of securing some means of determining the status of the host of mixtures, some ethical, some "proprietary," and some out-and-out nostrums, which now exist. The question at issue is as to the manner with which the situation shall be dealt. Can it be properly and successfully accomplished by legislation, either state or national? Some improvement can undoubtedly be secured through national legislation, insofar as the improvement of standard goods is concerned. But could national legislation, necessarily limited within the constitution, deal with more than a mere fraction of the problems that should be taken up and solved?

State legislation is less limited in possible scope, for it is not confined within the limits of the U. S. Constitution. Probably laws that would be within the limitations of the various state constitutions could be, theoretically, framed. But could they be made uniform, and could they be so framed as to cover the essential desiderata? And in the event that they could be framed and cover the ground properly, is it likely that such uniform laws could be passed in all the states? It is, on the one hand, contended that such state legislation should be striven for; on the other, that an immense amount of time and energy would necessarily be spent in this well-nigh Herculean task, and that if the laws could be passed, they would not be enforced. The committee is very desirous of securing as many opinions on these points as possible, to be considered in the preparation of its report.

Could legislation, either state or national, do anything to remedy the deplorable condition pointed out in a letter which I recently received from one of the best-posted physicians in the country, relative to the ethical status of present conditions? He says, in part: "In the good old days the medical profession stood as a unit in condemnation of all secrecy and monopoly in medicine. To-day, the professional spirit has waned to such a degree that the physician who sees advertised in his medical journal such things as ——, —— or —— does not stop to ask what place these things have in a scientific materia medica, but gives the new remedy a trial. It may be that the formula is published; it may be that there is a vague and prevaricating statement of the composition of the remedy, or it may be that a sphynx-like silence is maintained. So it has come to pass that largely the American physician of to-day is prescribing and is content to prescribe secret nostrums in place of remedies of known therapeutic properties." After reading his letter I read the Principles of Medical Ethics adopted by the American Medical Association, Chap. I, Art. I, Sec. 8, as follows: "It is equally derogatory to professional character for physicians to . . . dispense or promote the use of secret medicines . . . ."

I voice not only my individual views, but also, I believe, the views of most, if not all, of the other members of the committee, when I say that we would like, if possible, to provide some means of bringing the profession back a little nearer to this section of the Principles of Ethics. We would like to be enlightened on this point by the views of others. Is it possible to do this by means of legislation, or in any way except by our own individual and collective effort? Can the objects sought be secured through the means of legislation? Suggestions or criticisms should be sent either to the chairman, Dr. H. H. Rusby, 776 DeGraw Avenue, Forest Hill, Newark, N. J., or to the undersigned, the secretary, at 31 Post Street, San Francisco.

PHILIP MILLS JONES, M.D.

Technic in Treatment of Alcoholism.

MARINETTE, WIS., Jan. 5, 1904.

To the Editor:—Your editorial in THE JOURNAL, January 2, on "Technic in Treatment of Alcoholism," suggested by the paper of Dr. J. F. Kelley in the *Cleveland Medical Journal*, calls for a comment. It has been my custom for some time to stop the alcohol at once, and I have never been sorry for so doing.

A brief outline of treatment may be of interest: If, after an examination, the patient is found filled with liquor, he is given an emetic of apomorphia, 1/10 gr. will produce the desired results; then he is given a hot bath and put to bed, no restraint being used; the few cases in which a straight jacket or other appliances were used seemed to me to show that harm rather than good was produced. Alcohol in all its forms is stopped, and hot milk given every two hours, strychnia is given hypodermically to control the heart, and chloral, my favorite hypnotic in these cases, is sometimes used with morphia and hyoscin. The morphia, however, must be watched closely, as there are a number of patients whom it seems to aggravate. I usually order twenty grains of chloral every half hour until asleep; after the patient has rested six or eight hours, a saline cathartic is given; a hot bath, hot coffee and milk or beef tea are then given, for most of these cases have eaten little for several days. Then a capsicum mixture and the bromids are given freely.

Night and darkness are the favorite times for the demons that beset these people to appear, so it is well to have the room lighted when they are going to sleep. An attendant must be with the patient constantly, as in an absent moment he may do much harm. At night the chloral in hot milk is resumed, until the patient is asleep. With a liquid diet for a few days the patient will usually be able to help himself, with no desire, but rather an abhorrence, for any kind of stimulants. It seems to me that alcoholism is an acute poisoning, and I have never witnessed a death when withdrawal was immediate, but I am familiar with cases that died, in which alcohol was reduced gradually. The remark that delirium tremens is a result of withdrawal, rather than accumulation of alcohol, is true in accidents, surgery and pneumonia.

MAURICE DUANE BIRD, M.D.

Trades Unionism Among Hospital Attendants.

SHERMAN, TEXAS, Jan. 6, 1904.

To the Editor:—In THE JOURNAL, January 2, are an editorial, "Trades Unionism Among Hospital Attendants," and a letter from Dr. V. H. Podstata, entitled "Trades Unionism Among Asylum Employes," a subject of more than ordinary importance. The statement of Dr. Podstata: "It is a well-known fact that the attendants and nurses, as well as other employes at Dunning, are under the protection of civil service, the protection being so strong as to absolutely prevent me from either hiring or discharging an employe," is a startling revelation. The forming of a union by the attendants and employes "organized on the same basis as a regular labor organization" is ominous. Hospitals for the insane can not be successfully conducted without a proper organization of officers and employes, all working together under an established set of rules. The superintendent, being responsible for the management, can not have any discipline or order when operating under such a state of affairs as now exists at Dunning. The attendants, nurses and other employes, once established in that institution, are independent of the superintendent, and obey his rules and instructions as suits their fancy.

It will be conceded that the insane are among the most unfortunate and helpless of afflicted human beings and that their condition should elicit the deepest sympathy from every one. Having been deprived of reason and of self-control, an insane person is liable to commit almost any act, and when such an act displeases a heartless attendant the patient is punished. Every year charges of cruelty to the unfortunate wards of some of these institutions are made, and in most instances they have some foundation. There can be no doubt that many acts of cruelty are committed in these asylums by brutes employed as attendants, and in many instances are not brought to light. In such a condition as we find at Dunning, almost any sort of brutal act by an impatient, quick-tempered nurse or employe may be committed, not in the dark nor behind locked doors in the ward, with the patient at his mercy, but in the very presence of the superintendent, who has no authority to discharge such employe; his hands are tied, he has no recourse, and yet he is held responsible by his superiors and by public opinion. It can easily be imagined that if such a state of affairs becomes general, the vast work and the splendid progress already made will be for naught, and we will be relegated to that unhappy period of inhuman treatment which existed when Pinel and Connelly came on the stage and began their great work of reform in this prolific field.

The position of asylum attendant, in a majority of these institutions, is more desirable and better paid, for the class of people thus employed, than any other they can command outside, and is much sought.

I am sorry to state that in many asylums the progress of excellent work is often interrupted by politics. False economy presented in a byplay at the footlights and viewed with approval by an admiring but duped constituency, often destroys the success of a bright promise. While many of our asylums are too large, with a population too numerous to permit the attainment of the greatest success, the improvement in asylum management and treatment in the last half century has been steady. But in truth there is much to be accomplished. I hope the crusade against such unhappy conditions as obtains at Dunning will be continued.

J. T. WILSON.

Marriages.

ROBERT R. BERRY, M.D., to Miss Sarah Palmer, both of Union, S. C., December 30.

VINGE STVE', M.D., to Miss Rebecca Halvorson, both of Henning, Minn., January 2.

JOHN H. MCCASSY, M.D., to Miss Alva Bradstreet, both of Dayton, Ohio, January 6.

KARL MELTZER, M.D., to Miss Marie Ambrosius, both of the City of Mexico, December 30.

ARTHUR J. HERZIG, M.D., to Miss Blanche Hamburger, both of New York City, December 30.

CHARLES ANDREW COOPERRIDER, M.D., to Miss Helen Tippet, both of Columbus, Ohio, January 5.

B. FRANK BARNES, M.D., Newark, Ohio, to Miss Olive Mabel Marsh of Shawnee, Ohio, January 6.

JOHN H. BUSCHEMEYER, M.D., to Miss Florence H. Byrne, both of Louisville, Ky., December 29.

DUDLEY WILLIAMS, M.D., Boston, to Miss Mary Isabel Jones of Wilmington, Del., January 2.

CLARENCE E. BEEKLEY, M.D., Price Hill, Ohio, to Miss Louise Zugelter, at Sandusky, Ohio, January 5.

IRENAEUS W. RAYBURN, M.D., to Mrs. Elizabeth Scott, both of Kokomo, Ind., in Iowa, December 25.

JOSEPH F. WILLIAMS, M.D., Yellow Pine, Ala., to Miss Helen Rose McMain of Citronelle, Ala., December 30.

SIDNEY LOCKHART SCOTT, M.D., U. S. Navy, to Miss Marian Legare Reeves of Washington, D. C., December 23.

J. R. MARMADUKE DILLON, M.D., New Orleans, to Miss Laura Beckwith Lintner of Albany, N. Y., January 5.

ARTHUR HENRY STALL, M.D., Johnson's Corners, Ohio, to Miss Edna Carrie Prange of Akron, Ohio, at Barberton, Ohio, December 24.

Deaths.

Hamilton Atchison West, M.D., of Galveston, Texas, a member of the American Medical Association since 1892, and vice-president in 1896, died in New York City, December 31, aged 53 years. He was born in Kentucky in 1849, and spent his early life in the blue grass region. He studied medicine at Louisville and received his medical degree from the University of Louisville in 1872. After graduating he went to Texas and first located in Corsicana. In 1875 he became a resident of Galveston and soon became prominent as a practitioner and citizen. He was one of the original faculty of the Medical Department of the University of Texas, and until four years ago was professor of theory and practice of medicine in that institution. He possessed in a marked degree the power of imparting information to students and was extremely popular as an instructor. He made a special study of malaria, typhoid fever and yellow fever and his contributions to the literature on these subjects are authoritative. For twelve years he was secretary of the Texas State Medical Association, and at the time of the devastating flood in Galveston was made secretary of the board of health, and did noble work in that capacity. When the work of reorganization was inaugurated by the American Medical Association he took a deep interest in it, and to him is due the greatest credit for the reorganization of the medical profession of Texas. Dr. West had for a long time been suffering from nephritis, and in November he went to New York City for consultation as to the advisability of an operation, but such a measure was not considered wise. Dr. West rapidly declined and died December 31. He was buried in Galveston, January 4.

Jacob H. Vastine, M.D. Jefferson Medical College, Philadelphia, 1858, surgeon to the One Hundred and Thirtieth Pennsylvania Volunteer Infantry during the Civil War; a member of the Columbia Medical Society, the Pennsylvania State Medical Association and the American Medical Association, died at his home in Catawissa Pa., January 2, from Bright's disease, aged 68.

Theophalis Gilliam Birchett, M.D. University of Pennsylvania, Philadelphia, 1856, twice mayor of Vicksburg, Miss.; for several years superintendent of the Mississippi State Charity Hospital, Vicksburg, and once a member of the legislature, died suddenly at his home in Vicksburg, January 1, aged 68.

Byron Hiram Daggett, M.D. University of Buffalo, 1867, health physician of Buffalo for two terms; surgeon of the Seventy-fourth Infantry, N. G., N. Y., died at the Buffalo General Hospital, three days after an operation for the removal of gallstones, aged 61.

Fred W. Koehl, M.D. University of Iowa, Iowa City, 1897, a member of the county, district and state medical societies, and of the American Medical Association, died at his home in Waterloo, Iowa, January 1, from typhoid fever, after an illness of ten days.

Gustavus Adolphus Haefner, M.D. University of Maryland, Baltimore, 1867; a medical cadet in the Army during the Civil War; stationed at Navassa Island for 17 years, died at his home in Harlock, Md., January 3, after an illness of a year, aged 59.

Anton Eidenbenz, M.D. University of Giessen, Germany, 1846, of New York City, surgeon of the Eleventh New York Volunteer Infantry in the Civil War, died in St. Luke's Hospital, New York City, December 31, from pneumonia, aged 86.

Milton A. Halsted, M.D. Cleveland Homeopathic Medical College, 1881, surgeon of the Fifteenth New York Volunteer Cavalry in the Civil War, died at his home in Jacksonville, Ill., January 4, from pneumonia, following typhoid fever, aged 65.

Robert McIntyre, M.D. University of the Victoria College, Cobourg, Ont., 1862, for 30 years health officer of Hespeler, Ont., died suddenly at that place, January 4, from heart disease, while making a professional call, aged 66.

John Scott Hughson, M.D. Medical College of the State of South Carolina, Charleston, 1867, some-time mayor of Sumter, S. C., died at his home in that city, December 29, from heart disease, after a short illness, aged 63.

William M. Ikeler, M.D. University of Michigan, Ann Arbor, 1870, whose name was erroneously given as Skeler in THE JOURNAL, January 2, dropped dead at his home in Three Rivers, Mich., December 15.

William H. Chappell, M.D. Bennett College of Eclectic Medicine and Surgery, Chicago, 1874, was burned to death at his

office in Oregon, Ill., January 5, aged 55. The cause of the fire is unknown.

Daniel Voorhees Scott, M.D. University of Louisville, 1894, secretary of the Clark County, Ind., Board of Health, died at his home in Jeffersonville, Ind., from gastritis, January 6, aged 32.

Frank B. Powers, M.D. University of Michigan, Ann Arbor, 1893, formerly of Lawrenceburg, Ky., died suddenly in his rooms at Racine, Wis., December 30, from heart disease, aged 33.

Daniel Devine Cunningham, M.D. University of Michigan, Ann Arbor, 1892, died at his home in Coldwater, Mich., January 4, from nervous collapse, after an illness of three days, aged 41.

Fred A. Hemphill, M.D. Hahnemann Medical College, Philadelphia, 1899, of Allegheny, Pa., died suddenly at Bisbee, Ariz., where he had gone in search of health, December 24, from heart disease.

Theodore F. Sterling, M.D. West Virginia, 1881, died at his home in Parkersburg, W. Va., December 29. He was surgeon of the First Virginia Volunteer Infantry during the Civil War.

Edward Dolan, M.D. Bellevue Hospital Medical College, 1893, died at his home in Worthington, Minn., January 2, from the effects of carbolic acid accidentally taken, aged 37.

Henry J. Boyer, M.D. Jefferson Medical College, Philadelphia, 1862, died at his home in Myerstown, Pa., December 31, from diabetes, after an illness of 21 weeks, aged 62.

Philip H. Grier, M.D. University of Pennsylvania, for nine years mayor of Elizabeth, N. J., died at the New Jersey State Hospital, Trenton, January 2, aged 74.

Adolph J. Lengel, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1882, died at his home in Dallas, Texas, December 30, from apoplexy, aged 46.

George K. McAdoo, M.D. Western Pennsylvania Medical College, Pittsburg, 1892, died at his home in Butler, Pa., from typhoid fever, December 23, aged 37.

William A. Clore, M.D. Medical College of Ohio, Cincinnati, 1894, died suddenly at his home in Bullittsville, Ky., from heart disease, January 3, aged 34.

E. J. Stilley, M.D. Western Pennsylvania Medical College, Pittsburg, 1889, died at his home in Hope Church, Pa., January 3, after a short illness.

Frank S. Jackson, M.D. New York University, 1882, died at his home in Dunkirk, N. Y., January 2, from Bright's disease, after a short illness, aged 52.

Archibald A. McDonald, M.D. Cleveland Medical College, 1874, formerly of Florence and Rockvale, Colo., died at Sierro, N. M., recently, from septicemia.

Silas J. Damon, M.D. American Health College, Cincinnati, 1876, died at his home in Bridgeport, Conn., December 31, from diabetes, aged 58.

Chester Smith, M.D. Homeopathic Hospital College, Cleveland, 1859, died from paralysis at his home in Portland, Mich., January 2, aged 72.

Laban S. Major, M.D. Botanico-Medical School of Ohio, Cincinnati, 1848, died at his home in Austin, Ill., January 3, aged 81.

John M. C. Damron, M.D. Rush Medical College, Chicago, 1860, of Vienna, Ill., died at Hot Springs, Ark., January 2, aged 80.

Joseph Hatton, M.D. Medical College of Georgia, Augusta, 1853, died suddenly at his home in Grovetown, Ga., December 30.

Edwin Freeman, M.D. Eclectic Medical Institute, Cincinnati, 1856, died at his home in Cincinnati, January 4, aged 70.

Joseph Popik, M.D. Bennett College of Eclectic Medicine and Surgery, 1896, died at Chicago, Nov. 18, 1903, aged 29.

W. F. Cherry, M.D. University of Maryland, Baltimore, 1887, died at his home in Coakley, N. C., December 25.

Russell R. Ramsey, M.D. University of Nashville, 1872, died at his home in Cleveland, Tenn., December 31.

William C. Bedford, M.D. Chicago Medical College, 1874, died recently at his home in Tombstone, Ariz.

William A. Cantrell, M.D. University of Louisville, 1847, died recently at his home in Little Rock, Ark.

John D. Walker, M.D. Tulane University, New Orleans, 1884, of Florence, Miss., died recently.

Frederick W. Uran, M.D., Ohio, died at his home in Cleveland, January 1, aged 81.

James L. Jones, M.D., retired, died at his home in Denison, Texas, December 30.

Miscellany.

The Butler Typhoid Case.—Judging from all the evidence in hand, Butler might almost as well have had no local board of health as the one which accepted the grave responsibilities of that position. In fact, perhaps, it would have been better off without than with the existing board, on which more or less reliance was placed, until it showed its utter incapacity. Finally, we wish to repeat our warning of a week ago, that hundreds of communities in this country are liable any day to be overwhelmed with the horrors of such an epidemic as that at Plymouth, or Ithaca, or Butler. These communities merely had to pay the penalties for impure water and lax sanitary administration which other communities equally neglectful have been fortunate enough to escape.—*Soper in Engineering News.*

Treatment of Abscesses with Nitric Acid.—M. Porosz of Budapest exclaims that if any one has once used a 2 to 5 per cent. solution of nitric acid in treatment of abscesses and buboes he will never treat them in any other way, as the effects are so satisfactory. He first evacuates the pus and then injects the solution with a urethral syringe as forcibly as possible. The abscess cavity becomes distended with the fluid which penetrates into every crevice and seems to stimulate the tissues in their work of repair after the germs in the lesion are killed by the action of the acid. In very deep buboes it may be necessary to repeat the injection daily, but healing is usually complete after two injections. The severest cases all healed in a week in his experience.—*Klinisch-therap. Wochft.*, X., No. 33, 1903.

Phototherapy in Ophthalmology.—H. Strebel of Munich has been applying light treatment to the eyes in some experimental research. The results indicate that the tissues of the eyes react in a different manner to the chemical rays from what is observed in the skin. The media of the eye allow the free passage of the ultra-violet rays, and he found it possible to induce a circumscribed inflammation in the retina. The iris responded to the chemical rays with hyperemia, moderate inflammation and pigmentation. It protects the tissues beneath, except when purposely excluded. He is convinced that conjunctivitis, blepharitis, eczematous keratitis and chalazion will prove amenable to phototherapy, and there is also a possibility that gonorrheal processes may be included in the list. He even suggests that direct sunlight may be utilized for tattooing the cornea. Besnamow has reported prompt healing of 5 cases of corneal ulcers after application of concentrated sunlight for two to five minutes daily, excluding the heat rays by passage through water. Strebel's iron light lamp was modified to adapt it to the eye for this research. The report of his experiments as read at the Naturforscher Congress is given in the *Klinisch-therap. Wochft.*, X, No. 45, 1903.

Book Notices.

MODERN METHODS IN THE SURGERY OF PARALYSES. With Special Reference to Muscle-Grafting, Tendon-Transplantation and Arthrodesis. By A. H. Tubby, M.S. Lond., F.R.C.S. Eng., Surgeon to, and Lecturer on Clinical and Orthopedic Surgery and in Charge of the Orthopedic Department at Westminster Hospital; and Robert Jones, F.R.C.S.E., Honorary Surgeon to the Royal Southern Hospital, Liverpool. Illustrated by 93 Figures and 58 Cases. Cloth. Pp. 311. Price, $3.25. London: Macmillan & Co. New York: The Macmillan Co. 1903.

This little work covers the subject of the modern treatment of paralytic deformities fairly well and the well-known reputations of its authors will ensure it a favorable reception. The authors, as they say, have not given special attention to the older methods—which are all described in text-books on orthopedics—but limit those mentioned to muscle grafting, tendon transplantation and arthrodesis, which have worked an im-

portant change in the treatment of this class of cases. There are one or two important methods which they do not mention and undoubtedly did not favor, such, for example, as the surgical treatment of clubfoot advocated by Phelps, which has recently found an English adherent in Little, whose article was abstracted in THE JOURNAL, November 7, '08, p. 1169. The book is well illustrated and printed and is really a valuable addition to surgical literature.

INTRODUCTION TO THE STUDY OF MALARIAL DISEASES. By Dr. Reinhold Ruge, of the Imperial German Navy. Translated by P. Edgar, M.B., C. M. Edin., District Surgeon: Teiuk Anson, F.M.S., and M. Eden Paul, M.D. Brux., M.R.C.S., L.R.C.P. Cloth. Pp. 187. Price, $2.75. London and New York: Rebman, Ltd. 1903.

This work is intended to provide, for ship surgeons and colonial physicians, a general résumé of the facts on malaria, its treatment, recognition, etc. It meets this purpose well. Our knowledge of malaria has greatly increased within the last few years, but this work is well up to date. The illustrations of the phases of the malarial parasites are good, as are also those of the malaria-bearing mosquitoes, and the graphic temperature curves throughout the text are also instructive. The staining methods are given in simple forms and the book is as a whole one that the physician in the tropics will find helpful. The English translation has been excellently done.

FIFTEENTH EDITION OF THE OFFICIAL REGISTER AND DIRECTORY OF PHYSICIANS AND SURGEONS IN THE STATE OF CALIFORNIA. Cloth. Pp. 242. Revised and Published by the Medical Society of the State of California. Nov. 15, 1903. Price, $2.50.

The California Physicians' Directory is a well gotten up and arranged volume containing, beside a list of physicians, the medical law of California, fee bills, society statistics, etc., which such a work is supposed to contain. It is conveniently arranged alphabetically and by locality so that any physician in California can be immediately placed. It is one of the most complete and certainly one of the best appearing of the state volumes of its class. It is issued by the board of trustees of the state medical society and is sent free to members. To others its price is $2.50 per copy. It is well worth it to any physician or business man in the State of California or with extensive business interests there.

RADIUM AND OTHER RADIOACTIVE SUBSTANCES: Polonium, Actinium and Thorium, with a Consideration of Phosphorescent and Fluorescent Substances, the Properties and Applications of Selenium and the Treatment of Disease by the Ultra-violet Light. By William J. Hammer, Consulting Electrical Engineer. Cloth. Pp. 72. Price, $1.00. New York: D. Van Nostrand Co. 1903.

This book is based on a lecture delivered last spring before the American Institute of Electrical Engineers. It is a description of the fundamental principles connected with the phenomena and the properties, of radium, selenium and other radio-active substances. The author includes a description of a visit to the Finsen Institute at Copenhagen and a review of the work done there. His statements regarding the value of this method of treatment for certain conditions are exaggerated.

AN ATLAS OF HUMAN ANATOMY. For Students and Physicians. By Carl Toldt, M.D., Professor of Anatomy in the University of Vienna. Assisted by Alois Dalla Rosa, M.D. Translated from the Third German Edition and Adapted to English and American and International Terminology. By M. Eden Paul, M.D. Brux., M.R.C.S., L.R.C.P. First Section. A. The Regions of the Human Body. B. Osteology. (Figures 1 to 377 and Index.) Cloth. Pp. 161. Price, $2.50. New York: Rebman Company. 1903.

This is a handsome volume. The work can be recommended as being perhaps as complete and accurate a handbook as is at present available. The author has endeavored to make the nomenclature thoroughly intelligible, using both Latin and English terms. The illustrations are excellent.

MAMMALIAN ANATOMY. With Special Reference to the Cat. By Alvin Davison, Ph.D., ex-Fellow of Princeton University. With Over 100 Illustrations, Made by W. H. Reese, A.M., from the Author's Dissections. Cloth. Pp. 250. Price, $1.50. Philadelphia: P. Blakiston's Son & Co. 1903.

The common cat is the most available animal for the anatomy student in biology. As there are plenty of cats and as their number has to be frequently curtailed they afford ample dissection material for the genuine student in this department; it is, therefore, wise to select the cat as a typical illustration of the work of comparative mammalian anatomy. Dr. Davison has given us a convenient text-book which will be of service to students.

A MANUAL OF HYGIENE AND SANITATION. By Seneca Egbert, M.D., Professor of Hygiene in the Medico-Chirurgical College of Philadelphia. New Third Edition, Enlarged and Thoroughly Revised. With 86 Illustrations. Cloth, Pp. 467. Price, $2.25 net. Philadelphia and New York: Lea Brothers & Co.

This third edition of Egbert's well-known work should have a generally favorable acceptance, not merely by the profession, but also by a large portion of the non-professional public who are more or less interested in sanitary matters. It is one of the best popular statements of general hygienic principles that we have and deserves a wide circulation. The present edition has been revised and includes some recent data as shown by the latest statistics, though in the main it is much like the previous editions and has not been specially enlarged.

A SURGICAL HANDBOOK. For the Use of Students, Practitioners, House Surgeons and Dressers. By Francis M. Caird, M.B., F.R.C.S. Edin., Assistant Surgeon, Royal Infirmary, Edinburgh, and Charles W. Cathcart, M.B., F.R.C.S. Eng., and Edin., Surgeon, Royal Infirmary, Edinburgh. With Very Numerous Illustrations. Twelfth Edition. Morocco. Pp. 323. Price, $2.75. London: Charles Griffin & Co., Ltd. Chicago: W. T. Keener & Co. 1903.

This book contains a surprising amount of information, considering the fact that it is pocket size. The illustrations are abundant, especially those on fractures and other emergency surgery, for which the book may be chiefly recommended. An unusual addition to a work on surgery is the series of recipes for food for the sick.

MODERN SURGERY. General and Operative. By John Chalmers DaCosta, M.D., Professor of the Principles of Surgery and of Clinical Surgery in the Jefferson Medical College, Philadelphia. With Over 700 Illustrations, Some in Colors. Cloth. Pp. 1099. Price, $5.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

The fourth edition of Dr. Da Costa's surgery has been revised and much new matter added. Modern methods are pretty thoroughly included, thus bringing it thoroughly up to date.

Association News.

Place of Session of the American Medical Association for 1905.—Attention is called to the action taken at the last session of the American Medical Association to the effect that any city wishing to invite the Association to meet at that place should present the invitation, together with all available facts concerning hotel accommodations, number and seating capacity of halls available for section meetings, intramural means of transportation, railroad facilities, etc., at least three months before the annual session of the preceding year. In accordance with the above, it is hoped that those cities which desire the Association in 1905 will send their invitations, with all information possible, on or before March 1, 1904.

M. L. HARRIS, M.D.,
Chairman Committee on Place of Session and Transportation,
100 State Street, Chicago.

State Boards of Registration.

COMING EXAMINATIONS.

Iowa State Board of Medical Examiners, Capitol Bldg., Des Moines, Jan. 26-27, 1904. Secretary, Dr. J. F. Kennedy, Des Moines.

New York State Board of Regents, at New York, Albany, Syracuse and Buffalo, Jan. 26-29. Secretary, James Russell Parsons, State Capitol, Albany.

Nebraska State Board of Health, State House, Lincoln, Neb., Feb. 10-11. Secretary, George H. Brash, M.D., Beatrice.

Kansas Board of Medical Examiners, State House, Topeka, Feb. 12. Secretary, O. F. Lewis, M.D., Hepler.

Massachusetts Report.—Dr. Edward B. Harvey, Boston, secretary of the Board of Registration in Medicine for the State of Massachusetts, reports the written examinations held at Boston, Nov. 10-11, 1903, as follows: Subjects, 9; questions, 60; percentage required, 70; candidates, 59; passed, 50; failed, 9.

PASSED.

College of Physicians and Surgeons, Boston, (1903) 75, 70.5, 70.
Boston University, (1903) 70.3, 75.6, 79.5, 79.8.
Baltimore Medical School, (1903) 70, 78.5, 71.1.
Tufts Medical School, (1903) 71.1, 71.4, 10.1.
College of Physicians and Surgeons, New York, (1903) 72.3, 82.4.
College of Physicians and Surgeons, Baltimore, (1903) 71.5, 78.5.

Harvard Medical School, (1901) 70.6, 78, 80.5, (1902) 73.3, 75.5, 75.6, (1903) 75.5, 83.7, 76.5, 74, 77.5.
University of Michigan, (1903) 75.4, (1901) 74.8.
University of New York, (1881) 70.3, (1880) 70.

College.	Year Grad.	Per Cent.
University of Louisville	(1901)	70.5
Southern Homeopathic College	(1903)	70.0
University of Naples	(1900)	82.1
Jefferson Medical College	(1903)	71.8
Imperial Alexanderian University, Finland	(1896)	78.3
Johns Hopkins Medical School	(1900)	80.0
Maryland Medical College	(1901)	76.5
Laval University	(1901)	79.3
Syracuse University	(1902)	80.2
McGill University	(1901)	78.7
American Medical Missionary College	(1903)	73.6
Medical School of Maine	(1901)	74.5
Kentucky School of Medicine	(1903)	75.1
University of Maryland	(1903)	74.0
University of Munich	(1903)	72.8
New York Homeopathic Medical College	(1898)	85.2
Yale Medical School	(1903)	84.0
Western Reserve	(1885)	71.0

FAILED.

Physicians and Surgeons, Baltimore	(1902)	59.6, (1903) 68.
Laval University	(1903)	62.4, (1901) 66.1.
University of Vermont	(1898)	65.1
Baltimore Medical	(1903)	66.6
Baltimore University	(1903)	43.0
Pulte Medical	(1902)	57.5
Kentucky School of Medicine	(1903)	55.3

The Public Service.

Army Changes.

Memorandum of changes of stations and duties of medical officers for the week ending Jan. 9, 1904:

Kulp, John S., asst.-surgeon, relieved from duty at Fort McDowell, Cal., and ordered to assume the duties of attending surgeon and examiner of recruits at Philadelphia.

Kiefer, Charles F., asst. surgeon, relieved from duty as attending surgeon and examiner of recruits, to take effect January 1, and will proceed to Fort Russell, Wyo., for duty.

Bushnell, Geo. E., surgeon, detailed to represent the Medical Department of the Army at the Tuberculosis Exposition at Baltimore, Jan. 25 to 31, 1904.

Stiles, H. R., asst.-surgeon, paragraph 12, S. O. 110, War Department, directing him to proceed to San Francisco, is revoked.

De Shon, George D., asst.-surgeon, relieved from duty at Boston, to take effect February 1, and ordered to Fort Des Moines, Iowa, for duty.

Wales, P. G., surgeon, relieved from duty at Fort Assiniboine, Mont., and ordered to San Francisco, for transportation to Manila, P. I.

Richardson, Geo. H., asst.-surgeon, resignation took effect January 1.

Greenleaf, H. S., asst.-surgeon, promoted captain and asst.-surgeon, U. S. Army.

Johnson, R. W., surgeon, will, in addition to present duties in connection with the Louisiana Purchase Exposition, St. Louis, supervise the sanitary conditions on grounds until April 1, 1904.

Polhemus, A. S., surgeon, leave extended two months.

Long, Charles J., contract dental surgeon, now in the Philippines, has been granted three months' leave of absence, and permission to return to the United States by the fluest route.

Springwater, Samuel A., contract surgeon, now at Chicago on two months' leave of absence from the Division of the Philippines, has been granted an extension of one months' leave.

Bodeen, William, contract surgeon, will go from Fort Delaware, Del., to Fort Morgan, Ala., for duty.

Stearns, Charles H., contract surgeon, now at Nevada, Mo., on two months' leave of absence, has been relieved from further duty in the Division of the Philippines, and ordered to Fort Monroe, Va., for duty.

Navy Changes.

Changes in the medical corps, U. S. Navy, for the week ending January 9, 1904:

Boyer, H. G., surgeon, on completion of board duty in connection with barracks ordered to Boston for special temporary duty, and then to the Naval Museum of Hygiene and Medical School, Washington, D. C.

Peck, A. E., asst.-surgeon, ordered to the *Pensacola*.

Elmer, M. K., asst.-surgeon, detached from the *Pensacola* and ordered to the *Hancock*.

Marine-Hospital Service.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the twenty-one days ended Jan. 7, 1904:

Mead, F. W., surgeon, granted leave of absence for one day, December 26.

White, J. H., surgeon, bureau letter granting leave of absence for five days from December 17, amended to read five days from December 19.

Magruder, G. [illegible], surgeon, granted leave of absence for two days from December 30.

Wertenbaker, C. P., Geddings, H. D., and Perry, J. C., P. A. surgeons, to report to chairman of examining board at Washington, D. C., January 18, for examination to determine their fitness for promotion to the grade of surgeon.

Rosenau, M. J., P. A. surgeon, detailed to represent the service at the meeting of the Society of American Bacteriologists at Philadelphia, December 29 and 30.

Wickes, H. W., P. A. surgeon, granted leave of absence for fifteen days from December 24.

Von Endorf, R. H., P. A. surgeon, to report to director of Hygienic Laboratory for temporary duty December 21, to proceed to the City of Mexico for special temporary duty December 31.

Foster, M. H., P. A. surgeon, granted leave of absence for four days from January 5.

Richardson, T. P., asst.-surgeon, granted leave of absence for one month from January 1.

Fox, Carroll, asst.-surgeon, granted leave of absence for five days from October 31, under paragraph 191 of the regulations.

McClintic, T. B., asst.-surgeon, granted leave of absence for seven days from December 26, under paragraph 191 of the regulations.

Francis, Edward, asst.-surgeon, to report to the director of the Hygienic Laboratory for duty.

Stimson, A. M., asst.-surgeon, granted extension of leave of absence for two days from December 15.

Ward, W. K., asst.-surgeon, granted leave of absence for one day, December 17, under paragraph 191 of the regulations.

Smith, F. C., asst. surgeon, relieved from duty at Immigration Depot, New York, and directed to proceed to Detroit and report to medical officer in command for duty and assignment to quarters.

Steger, E. M., asst.-surgeon, to proceed to Clarksburg, W. Va., for special temporary duty.

Gibson, L. P., P. A. surgeon, granted extension of leave of absence on account of sickness from November 20 to December 10.

Hume, Lee, A. A. surgeon, granted leave of absence for twelve days from December 19.

Tuttle, Jay, A. A. surgeon, granted leave of absence for ten days from December 21.

Brock, G. H., pharmacist, on being relieved from duty at Detroit, directed to proceed to Delaware Breakwater quarantine station and report to medical officer in command for duty and assignment to quarters, relieving Pharmacist L. C. Spangler.

Goodman, F. S., pharmacist, relieved from temporary duty at Laredo, Texas, and directed to rejoin station at Norfolk, Va.

Allen, G. C., pharmacist, to proceed to Louisville, Ky., for temporary duty.

Ilin, G. W., pharmacist, relieved from duty at San Francisco and directed to proceed to Detroit and report to medical officer in command for duty and assignment to quarters, relieving Pharmacist G. H. Brock.

Spangler, L. C., pharmacist, on being relieved from duty at Delaware Breakwater quarantine station, to proceed to Boston and report to medical officer in command for duty and assignment to quarters.

Bierman, C. H., pharmacist, granted leave of absence for eight days from December 22.

Irwin, Fairfax, surgeon, and Korn, W. A., asst.-surgeon, detailed as members of Revenue Cutter Service retiring board, to be convened at Philadelphia.

Rosenau, M. J., P. A. surgeon, four days' leave of absence from Jan. 1, 1904, under paragraph 180 of the regulations.

Amesse, J. C., asst.-surgeon, granted leave of absence on account of sickness for seven days.

Ashford, F. A., asst.-surgeon, relieved from duty at Chicago and directed to proceed to Milwaukee and assume temporary command of the service at that port.

BOARDS CONVENED.

Board convened at the Marine Hospital, Stapleton, N. Y., January 4, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board: Surgeon Preston H. Bailhache, chairman. P. A. Surgeon A. C. Smith, recorder.

Board to meet at Washington, D. C., January 18, for the purpose of examining certain officers to determine their fitness for promotion to the grade of surgeon. Detail for the board: Asst.-Surgeon-General A. H. Glennan, chairman. Asst.-Surgeon-General L. L. Williams. Asst.-Surgeon-General G. T. Vaughan, recorder.

Board convened at the Marine Hospital, Chelsea, Mass., Jan. 11, 1904, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board: Surgeon R. M. Woodward, chairman. Asst.-Surgeon W. C. Rucker, recorder.

Board to meet at Washington, D. C., for the purpose of considering revision of medical books on contract and preparation of list of professional books, etc. Detail for the board: Asst.-Surgeon-General L. L. Williams, chairman. Asst.-Surgeon-General H. D. Geddings. Asst.-Surgeon A. J. McLaughlin, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine Hospital Service, during the week ended Jan. 8, 1904:

SMALLPOX—UNITED STATES.

California: San Francisco, Dec. 21-27, 7 cases.
Illinois: Chicago, Dec. 26-Jan. 2, 3 cases.
Iowa: Dubuque, Dec. 26 Jan. 2, 1 case.
Louisiana: New Orleans, Dec. 26-Jan. 2, 1 case.
Maine: Dec. 31, Athens, present; Brighton, present; Madawaska County, 30 cases.
Maryland: Baltimore, Dec. 26-Jan. 2, 1 case.
Michigan: Dec. 26-Jan. 2, Flint, 1 case; Port Huron, 2 cases.
Missouri: St. Louis, Dec. 19-Jan. 2, 6 cases.
New Hampshire: Manchester, Dec. 26-Jan. 2, 1 case.
New Jersey: Dec. 26-Jan. 2, Camden, 5 cases; Trenton, 2 cases.
New York: Buffalo, Dec. 21-Jan. 2, 12 cases; New York, Dec. 26-Jan. 2, 1 case, 1 death.
Ohio: Dayton, Dec. 26 Jan. 2, 2 cases.
Pennsylvania: Dec. 26-Jan. 2, Altoona, 1 death at county hospital; Erie, 2 cases; McKeesport, 3 cases; Philadelphia, 74 cases, 11 deaths; Pittsburg, 17 cases, 4 deaths; Reading, 1 case; Johnstown, Dec. 19-Jan. 2, 4 cases, 1 death.
Tennessee: Dec. 26-Jan. 2, Memphis, 8 cases, 2 deaths; Nashville, 1 case.
Utah: Salt Lake City, Dec. 26-Jan. 2, 3 cases, all imported.
Wisconsin: Milwaukee, Dec. 26-Jan. 2, 2 cases.

SMALLPOX—FOREIGN.

Austria: Prague, Dec. 9-12, 21 cases.
Brazil: Pernambuco, Nov. 1-15, 20 cases; Rio de Janeiro, Nov. 29-Dec. 6, 58 cases, 50 deaths.
Great Britain: Dec. 12-19, Birmingham, 1 case; Liverpool, 1 case; London, 6 cases; Manchester, 4 cases; New Castle, 5 cases.
Italy: Catania, Dec. 10-17, 3 deaths.
Russia: Odessa, Dec. 5-12, 2 cases; Warsaw, Nov. 7-14, 10 deaths.
Turkey: Smyrna, Nov. 29-Dec. 13, 13 deaths.

YELLOW FEVER—UNITED STATES.

Texas: Laredo, Dec. 30-Jan. 2, 2 cases.

YELLOW FEVER—FOREIGN.

Brazil: Rio de Janeiro, Nov. 22-Dec. 6, 1 case.
Ecuador: Guayaquil: Dec. 6-12, 1 death.
Mexico: Ciudad Victoria, Dec. 12-19, 3 cases, 2 deaths; Dec. 13-19, Merida, 6 cases; Tehuantepec, 1 case, 1 death.

PLAGUE.

Brazil: Rio de Janeiro, Nov. 29-Dec. 6, 27 cases, 22 deaths.
China: Hongkong, Nov. 21-27, 3 deaths.
Egypt: Nov. 28-Dec. 4, 3 cases, 2 deaths.
India: Bombay, Nov. 1-8, 51 deaths; Calcutta, Nov. 28-Dec. 5, 14 deaths; Karachi, Nov. 29-Dec. 6, 6 cases, 6 deaths; Madras, Nov. 28-Dec. 4, 1 death.
Japan: Yokohama, Nov. 21-28, 1 case, 1 death.

CHOLERA.

India: Calcutta, Nov. 28-Dec. 5, 42 cases; Madras, Nov. 20-Dec. 4, 3 deaths.
Turkey in Asia: Nov. 30, 80 cases.

Medical Organization.

California.

STANISLAUS COUNTY MEDICAL SOCIETY.—A meeting of the physicians of the county was held at Modesto, December 5, at which the first steps toward organization on the standard plan were taken. Dr. Benjamin F. Surrhyne was elected chairman, and Dr. George F. Bradbury secretary, both of Modesto.

BUTTE COUNTY MEDICAL SOCIETY.—This society was organized on the standard plan at Chico, December 19, and the following officers were elected: Dr. Oscar Stansbury, Chico, president; Dr. Eli A. Kusel, Oroville, vice-president; Dr. D. H. Moulton, Chico, secretary and treasurer; Dr. Oscar Stansbury, Chico, delegate to the state society, and Dr. Buchanan Caldwell, Biggs, alternate.

SANTA CRUZ COUNTY MEDICAL SOCIETY.—In response to an invitation from Dr. Phillip M. Jones, San Francisco, representing the state society, the physicians of the county met at Santa Cruz, December 22, and organized a county society on the standard plan, with the following officers: Dr. Exeter P. Vaux, Santa Cruz, president; Dr. Spencer C. Rodgers, Watsonville, vice-president; Dr. Saxon T. Pope, Watsonville, secretary; Dr. Ira C. Bush, Santa Cruz, treasurer; Drs. James F. Christal, Santa Cruz; William A. Phillips, Santa Cruz, and Nat. Green, Watsonville, censors; Dr. Saxon T. Pope, Watsonville, delegate to the state society, and Dr. Willis R. Congdon, Santa Cruz, alternate.

Illinois.

PUTNAM COUNTY MEDICAL SOCIETY.—Dr. William O. Ensign, Rutland, councilor for the Second District, met the physicians of the county at McNabb, November 28, and assisted them in organizing a county society on the standard plan, with Dr. Osker F. Taylor, Magnolia, president, and Dr. Edgar A. Hall, Florid, secretary.

Indian Territory.

PICKENS COUNTY, CHICKASAW NATION MEDICAL SOCIETY.—The physicians of this county have organized a medical society.

INDIAN TERRITORY (WESTERN DISTRICT) MEDICAL ASSOCIATION.—At the meeting held in Muskogee, December 9, the society decided to be governed by the rules of the American Medical Association.

Indiana.

KANKAKEE VALLEY DISTRICT MEDICAL ASSOCIATION.—At the winter session of the Kankakee Valley Medical Society, held in Hammond, December 8, it was voted that the organization conform to the rules of the American Medical Association adopted by the Indiana State Medical Society. The following vice-presidents for counties in the district were appointed: Lake County, Dr. H. E. Sharrer, Hammond; Porter County, Dr. Joseph C. Carson, Valparaiso; La Porte County, Dr. Frederick A. McGrew, La Porte; St. Joseph County, Dr. Charles A. Daugherty, South Bend; Starke County, Dr. L. Dow Glazebrook, Knox; Marshall County, Dr. Novitas B. Aspinall, Plymouth; Newton County, Dr. Theodore E. Collier, Brook; Jasper County, the late Dr. Israel B. Washburn, Rensselaer; Pulaski County, Dr. George W. Thompson, Winamac; Fulton County, Dr. George E. Hoffman, Rochester; Cass County, Dr. Nelson W. Cady, Logansport, and Carroll County, Dr. William F. Sharrer, Delphi.

Iowa.

WEBSTER COUNTY MEDICAL SOCIETY.—This society has endorsed the reorganization of the state society on the standard plan.

MUSCATINE COUNTY MEDICAL SOCIETY.—At an informal meeting held at Muscatine, December 11, the society, after reading the new by-laws, with the clauses objected to by three county societies, agreed by mutual consent to stand by and uphold the state society.

CLINTON COUNTY MEDICAL SOCIETY.—At the annual meeting held in Clinton, January 5, Dr. George A. Smith was elected president; Dr. Herbert R. Sugg, vice-president, and Dr. E. L. Martindale, secretary and treasurer, all of Clinton. The society voted to incorporate, and postponed the discussion of the proposed affiliation with the state society until the April meeting.

ADAIR COUNTY MEDICAL SOCIETY.—At a meeting of physicians held in Greenfield, December 17, a county society was formed on the standard plan, with the following officers: Dr. Thomas W. Mulhern, Greenfield, president; Dr. John E. Howe, Greenfield, vice-president; Dr. Pierre McDermid, Fontanelle, secretary, and Dr. James A. Harper, Jr., Greenfield, delegate to the state society.

UNION COUNTY MEDICAL SOCIETY.—Dr. Edward E. Dorr, Des Moines, councilor for the Seventh District, has organized this society, at Creston, on the standard plan, with the following officers: President, Dr. Moses B. Reed, Cromwell; vice-president, Dr. Benjamin F. Gillmore, Creston; secretary and treasurer, Dr. Joseph P. Claybaugh, Creston, and delegate to the state society, Dr. H. G. Lynch, Spaulding.

PLYMOUTH COUNTY MEDICAL SOCIETY.—The physicians of the county met at Lemars, December 12, and with the aid of Dr. Edward Hornibrook, Cherokee, councilor for the Eleventh District, organized a society on the standard plan, with the following officers; Dr. Milton W. Richey, Lemars, president; Dr. Alfred H. Jastrom, Jensen, vice-president; Dr. G. Henry Mainmen, Lemars, secretary; Dr. Howard J. Wright, Kingsley, treasurer, and Drs. L. W. Wuesthoff, Struble, Mary A. Breen, Lemars, and John H. Rippey, Kingsley, censors.

Maryland.

QUEEN ANNE COUNTY MEDICAL SOCIETY.—The physicians of the county met at Centerville, December 9, and organized a county society, of which Dr. James Bordley was elected president, and Dr. James M. C. Cockran, secretary, both of Centerville.

SOMERSET COUNTY MEDICAL SOCIETY.—Under the auspices of the Medical and Chirurgical Faculty of Maryland, represented by Drs. Henry O. Reik, Baltimore, and Brice W. Goldsborough, Cambridge, a county society was organized at Princess Anne, December 12, with a charter membership of 9. The following officers were elected: Dr. Charles W. Wainwright, Princess Anne, president; Dr. William F. Hall, Crisfield, vice-president; Dr. Martin W. Goldsborough, Princess Anne, secretary, and Dr. Ralph L. Hoyt, Oriole, treasurer.

MONTGOMERY COUNTY MEDICAL SOCIETY.—Dr. Thomas A. Ashby, Baltimore, met with the physicians of Montgomery County at Rockville, December 11, delivered an address and assisted in the organization of a county society on the standard plan, with the following officers: President, Dr. Roger Brooke, Sandy Springs; vice-president, Dr. Horace B. Haddox, Gaithersburg; secretary-treasurer, Dr. John L. Lewis, Bethesda, and censors, Drs. Edward Anderson, Rockville, W. Thawley Pratt, Potomac, and Elisha C. Etchison, Gaithersburg.

Mississippi.

AUDRAIN COUNTY MEDICAL SOCIETY.—This society has been chartered by the state association, with an initial membership of sixteen, and the following officers: Dr. Robert W. Berry, Young's Creek, president; Dr. Charles T. Varnon, Mexico, vice-president, and Dr. C. A. Bothwell, secretary.

HOWELL COUNTY MEDICAL ASSOCIATION.—The physicians of the county met at West Plains recently and organized a county society, with the following officers: Dr. James C. B. Dixon, West Plains, president; Dr. Junius W. Bingham, Pottersville, vice-president; Dr. Henry C. Shuttee, West Plains, secretary, and Dr. Henry A. Thompson, Lanton, treasurer.

NEWTON COUNTY MEDICAL ASSOCIATION.—Physicians of the county met at Newton, December 14, and organized a county

society, all but six of the physicians of the county being present. Dr. G. H. McNeill, Newton, was elected president; Dr. S. Barto Henton, Decatur, vice-president, and Dr. A. Lee Monroe, Lawrence, secretary and treasurer. A committee, consisting of Drs. G. H. McNeill, Newton; John B. Bailey, Conshatta; A. Lee Monroe, Lawrence, W. S. Norris, Stamper; John S. Adams, Chunkey's Station, and I. W. Cooper, Newton, was appointed to draft a constitution and by-laws.

North Carolina.

WILKES COUNTY MEDICAL SOCIETY.—The physicians of the county met at Wilkesboro, December 9, and organized a county society, with the following officers: Dr. John W. White, Wilkesboro, president; Dr. James M. Turner, Wilkesboro, vice-president, and Dr. M. V. Burrus, secretary and treasurer.

Ohio.

CARROLL COUNTY MEDICAL SOCIETY.—This society adopted a new constitution and by-laws at its meeting in Carrollton, December 14. Dr. John R. Williams, Carrollton, was elected president, and Dr. James J. Hathaway, Carrollton, secretary and treasurer.

Pennsylvania.

WEST PHILADELPHIA BRANCH OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY.—This society was organized December 26. Dr. Milton B. Hartzell was elected chairman, and Dr. Charles A. E. Codman, secretary.

South Dakota.

SOUTH DAKOTA (SEVENTH DISTRICT) MEDICAL SOCIETY.—The organization of this society was perfected at a meeting of physicians at Sioux Falls, December 10. The following officers were elected: Dr. Stephen Olney, president; Dr. Arthur H. Tufts, vice-president; Dr. John R. Hawkins, secretary, and Dr. Cora W. Carpenter, treasurer, all of Sioux Falls.

Wisconsin.

ROCK COUNTY MEDICAL SOCIETY.—This society was organized last month at Janesville on the standard plan, the following officers being elected: President, Dr. Ernest C. Helm, Beloit; vice-president, Dr. Quincy O. Sutherland, Janesville; secretary, Dr. George W. Fifield, Janesville; treasurer, Dr. Samuel B. Buckmaster, Janesville, and censors, Drs. Isaac Buckeridge, Beloit; John F. Pember, Janesville, and James Mills, Janesville.

JEFFERSON COUNTY MEDICAL SOCIETY.—About twenty physicians of the county met at Jefferson, December 8, perfected the permanent organization of a county society, and elected the following officers: Dr. William W. Reed, Jefferson, president; Dr. William F. Whyte, Watertown, vice-president; Dr. C. E. Lauder, Johnson Creek, secretary and treasurer, and Drs. Carl R. Feld, Watertown; William A. Engsberg, Lake Mills, and Urban P. Stair, Fort Atkinson, censors.

Society Proceedings.

MEDICAL SOCIETY OF THE CITY AND COUNTY OF DENVER.

Annual Meeting, held in Denver, January 5.

Dr. H. W. McLauthlin read a "Memorial Paper on the Life of Dr. Whitehead," in which he pointed out the great services he rendered the medical profession of Denver as an anatomist, surgeon and sanitarian. Special attention was paid to Dr. Whitehead's operation for cleft palate and his invention of several ingenious instruments.

Dr. George B. Packard, in his presidential address, dwelt on the benefits of the reorganization of the state and county societies, and suggested that the society emulate the example of the St. Paul society in building up a medical library, and in striving to possess a home of its own.

New Officers.

These officers were elected: Dr. S. D. Hopkins, president; Dr. W. J. Rothwell, vice-president; Dr. E. J. Rothwell, treasurer; Dr. L. B. Lockard, recording secretary; censors: Drs. S. D. Van Meter, L. N. Macomber, I. B. Perkins, Edward Jackson, and J. M. Burns; delegates to state society: Drs. G. B. Packard, Clarence L. Wheaton and John Chase. The following committee was appointed to consider the suggestion of the president in reference to a library and home: Drs. C. D. Spivak, J. M. Blaine, Edward Jackson, Donald Kennedy and L. B. Lockard.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

Special Meeting, held Jan. 7, 1904.

The Results of the Treatment of Congenital Hip Dislocation.

A special meeting was held at the Children's Hospital for the purpose of hearing the report of the orthopedic staff of the hospital signed by Drs. Edward H. Bradford, Robert W. Lovett, E. G. Brackett, John Dane and Augustus Thorndike on the treatment of congenital hip disease in children. A large number of physicians and surgeons who last year witnessed the operations of Dr. Adolf Lorenz were present on invitation to hear the first official report of the success of those operations. The report was a provisional one, and covered 138 cases treated in the hospital during the last twenty years. There has been a steady gain in the success of the surgeons. Thus, while in the period previous to 1896 all the 26 cases treated were failures, in 1896-1902 out of 54 cases treated 12 were successful, and only 13 are known failures; 1902 included those cases treated by Dr. Lorenz, and of 22 cases treated 11 were successful, 4 failures, 4 showed improvement, and 3 results are not known; 1903 was a distinct advance on this even, for 33 cases were treated and 24 are successful, 6 failures and 3 results unknown. This gain is attributed in great part to the use of the machine devised by Ralph W. Bartlett, a young Boston lawyer, for of the 24 successful cases 18 were manipulated by its aid. But one case was treated surgically by incision this last year, and that was unsuccessful. Of the six cases treated by Dr. Lorenz, five were successes, the sixth being a child 9 years old, for whom the surgeon did not expect success.

The report dealt with the great advance made in anatomic knowledge of the parts, to which the staff of the Children's Hospital have contributed much, and the aid to be derived from the use of the *x*-ray, which now makes accurate diagnosis possible, both before and after treatment.

In all the cases treated there has not been a single surgical disaster or fatality. The conclusions drawn are that congenital hip disease is curable. It should be treated in infancy or early childhood by manipulative methods, but even at advanced years, if less than 10, the manipulative or mechanical method should first be tried, and if unsuccessful, the surgical operation should follow. This can be performed to-day with greater hope of success because of the great increase in anatomic knowledge. The exact limits for the manipulative method can only be determined by time.

At the request of the staff a committee consisting of Drs. David W. Cheever, J. Collins Warren, Charles F. Painter of Boston, and Dr. V. P. Gibney of New York was appointed by the society to verify the data and pass on the conclusions of the report.

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Sixteenth Annual Session, held in Atlanta, Ga., Dec. 15-17, 1903.

(*Concluded from page 118.*)

The Technic of the Vaginal Method.

DR. J. RIDDLE GOFFE, New York, said that in his own hands the scope of the operation was no longer confined, on the one hand, to simple puncture and drainage, nor limited, on the other, to the radical operation of hysterectomy. All the intermediate procedures that were called for by the many pathologic conditions found in a woman's pelvis found their most direct route through the vagina.

There were two vaginal incisions through which the pelvic cavity could be reached; one, posterior and the other anterior to the cervix. The latter afforded the greater facilities for operative procedures, and the one on which he depended almost exclusively. The posterior incision is frequently used in connection with it to secure drainage and in some cases for manipulation. The method lent itself to every form of conservative work on the uterus and its appendages that had been

suggested in the trend of recent modern gynecology. The successful application of it required patience, experience and skill, but when once the profession had been convinced of its superiority he believed it would grow in favor.

Tubercular Ostitis of the Knee.

DR. A. R. SHANDS, Washington, D. C., said that the management of a case of white swelling could be embraced in the terms immobilization and protection in any and all stages of the disease. When it became necessary to incise and drain a joint, it should be done thoroughly and good drainage should be kept up just as long as there was any discharge. When the infection of the joint was due to an ostitis that was near the surface of the ends of the bone, often the diseased bone sloughed away, and when it could be easily located and curetted, most excellent results were obtained. The operation of excision of the knee should never be done in children except in extreme cases, and even then the author believed that amputation would be best, for an artificial leg is more useful than such a leg as a child would have after excision.

The Differential Diagnosis of Syphilis and Cancer of the Vulva.

DR. BARTON COOKE HIRST, Philadelphia, reported the case of a woman, 28 years of age, single, who had never been pregnant. She denied ever having led an immoral life, and the possibility of venereal infection. Ten years ago she was operated on in the Pennsylvania Hospital for hemorrhoids and fissure in ano. The wound of the operation did not heal properly. More than a year ago the patient noticed an ulcerated condition of the vulva, and a short time afterward incontinence of feces, followed soon by incontinence of urine. For two years past there had been amenorrhea. On a specular and digital examination, a fistula between the fossa navicularis and the rectum was discovered. The whole urethra was gone; there were three little tubercles at the neck of the bladder, these being all that was left of it. The vagina above the neck of the bladder was perfectly healthy. The cervix was normal except that it was atrophic, as was the whole uterus. The case, at first sight, looked like an inoperable epithelioma of the vulva, and was pronounced to be so by one of the most experienced dermatologists in Philadelphia. But there was none of that extensive infiltration and elevation of the skin surface around the edges of the ulceration, such as was seen in an example of extensive epithelioma of the vulva, considerably advanced, but not yet inoperable. Moreover, numerous pieces of tissue from different places in the ulcerated area showed nothing characteristic of cancer. There was everywhere the most extensive round-cell infiltration and necrosis of tissue. The microscopic study, as well as the macroscopic appearance suggested syphilis in the ulcerated gummatous form. Accordingly the patient was put on specific treatment in spite of her negative history. The treatment was given up within a week, as the patient was severely ptyalized.

Lupus next suggested itself. On two separate occasions, under anesthesia, twelve or fifteen pieces of diseased tissue were removed for microscopic examination. No tubercles nor bacilli could be discovered anywhere. Inoculations in animals were negative. The urine contained no tubercle bacilli. The bladder itself was healthy. There was a response to the tuberculin test, but the woman had a patch of consolidation in the apex of one lung. Meanwhile the patient was given *x*-ray treatments every other day for eight to ten minutes. Within three weeks the external ulceration was healed. Two weeks later the rectovaginal fistula spontaneously closed under the continuance of the *x*-ray applications. Nothing remained of the original disease except the absence of the urethra and an elephantiasic condition of the labia majora. The former had been corrected by urethroplasty. He had not yet joined the new urethra to the opening in the bladder, so that the establishment of continence of urine was still doubtful, but he was quite hopeful of making the patient eventually entirely comfortable.

Symposium on Appendicitis.

DR. GEORGE R. DEAN, Spartansburg, S. C., considered appendicitis a surgical disease, and said that when it was once discovered there was only one proposition to be made, namely, to urge operation at the earliest possible moment.

DR. J. M. BALDY, Philadelphia, said that his experience had led him to differ with those gentlemen who held that appendicitis generated pelvic inflammatory disease, or that pelvic inflammatory disease caused appendicitis. The two diseases were rarely associated, and only then as a coincidence. He had not seen a case in which, having found pus in a fallopian tube, he had found pus in the involved vermiform appendix; nor had he found a perforating or gangrenous appendix in such a case. On the other hand, where he had found a perforated or gangrenous vermiform appendix, or one which contained pus, either in its cavity or enclosed in its walls, he had never noticed pus in a fallopian tube or ovary. Should he find such conditions, it would appear to him that the two diseases existed as a coincidence and independently of each other, as far as direct infection from one to the other was concerned.

DR. I. S. STONE, Washington, D. C., said: First, one should consider every delayed case with anxiety lest there should be retroperitoneal infection. Second, one should be careful to give a guarded prognosis in every case of appendicitis ushered in by or complicated by chills or any symptoms of sepsis. Third, if operating in such cases, one should consider retroperitoneal infection as already started, and act accordingly. The discovery and proper treatment of such infection was as important as the usual intraperitoneal technic.

DR. ROBERT T. MORRIS, New York, said that the surgeon could not do good work, particularly in abdominal surgery, if he began his work with incisions that were too short, but after one had acquired a certain amount of skill in technic he could return to the shorter incisions. With long incisions there is more shock; more adhesions; first, because the exposure of the peritoneum through a long incision excites greater inflammatory reaction, and, second, the longer the incision, the greater the danger of infection from the aerial bacteria.

The Significance of and Management of Paralysis of the Bowel.

DR. GEORGE S. BROWN, Birmingham, Ala., expressed the view that paralysis of the bowel in the presence of inflammation of the peritoneum was to be regarded, not as a pathologic condition to be combated, but rather as Nature's way of allowing the plastic exudate to form adhesions, and confine the infection. He held that it was not the paralysis, but the overdistention of the bowel, that should be fought.

It seemed to him that if the Ochsner plan of treatment would tide over a patient with a gangrenous appendix, such a patient could have a much better chance if that appendix were removed, and to the Ochsner treatment were added the tight abdominal binder with water to relieve thirst and wash out the stomach, if there was vomiting, together with opium *ad libitum*, to relieve pain and keep down peristalsis.

In a total experience of 90 cases of appendicitis he had 66 pus cases, 24 of which had been treated by the plan of starvation, except as to water, prolonged irrigation of the stomach before leaving the table, a tight abdominal binder and opium. Eighteen of these patients had more or less diffuse peritonitis, and 12 of these were so severe that they had to be extensively disemboweled in order that adhesions could be broken up and septic material wiped away. Only 2 of these died. These might have recovered had they been tided over without operation, but as they were both *in extremis* at the time, probably the only thing saved would have been the reputation of the surgeon. Of 5 other deaths occurring in the 90 cases, 2 were due to subdiaphragmatic abscess rupturing into the lung, 1 to regurgitant vomiting, due to the presence of a large quantity of castor oil in the bowel which was not washed out, and 2 early cases where abscesses that had already set up a diffuse peritonitis were merely incised.

Cases of Intestinal Obstruction Treated by Resection.

DR. W. H. DOUGHTY, JR., Augusta, Ga., reported three successful cases of resection of intestine for obstruction due to gangrenous umbilical hernia; volvulus, and intussusception re-

spectively. One of the cases was unique, so far as the author knew, in that the strangulated loop of intestine in the hernia was a part of a greater segment which had been strangulated by volvulus. It was likely that the descent of the herniated coil took place shortly after the occurrence of the volvulus, and its strangulation was occasioned by the congestion which followed the latter.

The almost invariable fatality which attended the operation he attributed to the toxemia that was induced by gangrene of the intussusceptum. In one case, however, which he outlined, in spite of the unmistakably gangrenous patches on the intussuscipiens and involving even the mesentery, the patient, though far from being in a satisfactory condition, stood the operation fairly well, rallied promptly from the depression which attended it, and recovered without interruption.

Free Growths in the Tunica Vaginalis.

DR. EDWARD A. BALLOCH, Washington, D. C., reported the case of a colored boy, 16 years of age, who, during eight years, had had develop a painless enlargement in the upper part of the right of the scrotum. Examination showed a scrotum reaching nearly to the knees and measuring twenty-one inches in circumference at its largest point. Both testicles and both cords could be made out, and felt normal as to size, shape and consistence. There was no fluid in the scrotum, but a peculiar gelatinous, flabby feeling of the scrotal tissue. Three separate tumors were felt, freely movable in relation to cord, testis, and scrotal tissues.

The diagnosis of fibroid growths in the tunica vaginalis was based partly on the history of a slow, painless growth, and absence of ulceration and fistulæ, excluding cancer, syphilis and tuberculosis, and partly on the physical characteristics of the growths, together with a keloid behind the right ear which was interpreted as indicating a tendency to fibromatosis in the patient.

Operation showed the tunica greatly enlarged and thickened, and converted into a gelatinous mass. The upper tumor ran into the inguinal canal and was attached there by a pedicle. The other two showed no distinct points of attachment. The tumors weighed thirty-eight ounces, and the tunica twenty ounces.

The growths were soft fibromata, with areas of fatty and myxomatous degenerations. The testicle also showed areas of beginning myxomatous degeneration. It was concluded that the growths had their origin in the subserous connective tissue.

Examination of the literature showed but one case resembling the one reported, although there were several reports of minute fibrous growths on the tunic following hydrocele treated by the injection of iodin.

Colloid Carcinoma of the Rectum with Excision by the Combined Vaginal and Inguinal Routes.

DR. J. HORACE WHITACRE, Cincinnati, Ohio, reported a case of colloid carcinoma which had developed as a hard, uniform thickening of the entire circumference of the rectum and about six inches in length. The great predominance of fibrous tissue, the uniform involvement of a long segment of the bowel, and the appearance of minute nodules resembling miliary tubercles in the primary tumor of the rectum all spoke for hyperplastic tuberculosis of the bowel. A third point worthy of mention was the exceedingly rapid development of the solidly carcinomatous ovarian tumors from half a dozen minute miliary metastases on the peritoneal surfaces of each. These tumors were friable and almost jellylike, as were all of the metastases, whereas the original tumor was as hard as cartilage.

Resuscitation of Animals Apparently Dead.

DR. GEORGE W. CRILE, Cleveland, Ohio, read a short paper on this subject, giving a summary of experimental data. When asphyxia caused failure of the heart and respiration, vigorous artificial respiration usually restored their function when administered within a few seconds. It was effective in an inverse ratio to the time that had elapsed; it was rarely effective after forty seconds. Animals apparently dead for periods up to fifteen minutes were resuscitated by the combined effect of artificial respiration, rhythmic pressure on the heart, and the infusion of adrenalin. When the blood pressure had risen to thirty or more mm. Hg., the heart began to beat and the blood pressure was rapidly restored. The return of respiration was signaled by a short, almost imperceptible movement of the diaphragm, the respiratory action becoming gradually stronger and more frequent. The conjunctival reflex returned early. Some of the experiments failed on account of too great elevation of the adrenalin bottle; some on account of an overdose of adrenalin, several were only partially successful, owing to the great dilution of the adrenalin.

Experiments in which saline infusion was substituted for adrenalin, and which were unsuccessful, were promptly successful on adding adrenalin. In a patient with crushed skull, and whose heart had ceased beating for nine minutes, resuscitation of the heart for thirty-one minutes by this method was made. During the operation for the elevation of the depressed bone, the patient moved his head.

Another patient apparently dead from a severe crushing of the base of the skull was partially resuscitated twenty-four minutes after the apparent death. The proofs of the apparent death were absence of respiration, absence of heart sound on a stethoscopic auscultation, and as a final proof, on opening the jugular vein there was absolutely no circulation. In this case the blood pressure rose to 80 mm. at one time; voluntary respiration appeared. These evidences of vital action continued for thirty-four minutes.

Officers for the Ensuing Year.

The following officers were elected: President, Dr. Floyd W. McRae, Atlanta, Ga.; vice-presidents, Drs. Geo. S. Brown, Birmingham, Ala., and J. Shelton Horsley, Richmond, Va.; treasurer, Dr. Charles M. Rosser, Dallas, Tex.; secretary, Dr. W. D. Haggard, Nashville, Tenn.

Birmingham, Ala., was selected as the place for holding the next annual meeting; time, Dec. 13-15, 1904.

Dr. John D. S. Davis, Birmingham, was selected as the chairman of the committee of arrangements.

Monument to Dr. Davis.

The former action of the association in appropriating $2,000 to a memorial, consisting of a ward bearing the name of the association in the City Hospital of Birmingham, was rescinded, and in lieu thereof $2,000 was appropriated to the erection of a monument in Birmingham to the memory of Dr. W. E. B. Davis.

Other papers read were: "Diagnosis and Treatment of Gallstones," by Dr. Mack Rogers, Birmingham, Ala.; "Pneumatic Rubber Suit," by Dr. George W. Crile, Cleveland, Ohio; "Extrauterine Pregnancy," by Dr. T. J. Crofford, Memphis, Tenn.; "The Complications Encountered in the Surgical Treatment of the Testicle," by Dr. J. McFadden Gaston, Jr., Atlanta, Ga.; "Septic Thrombosis of the Femoral Vein Following Influenza," by Dr. D. F. Talley, Birmingham, Ala.; "Bilateral Diffuse Virginal Hypertrophy of the Breasts," by Dr. George Ben. Johnston, Richmond, Va.; "Excision of the Psoas Magnus Muscle for Sarcoma," by Dr. George H. Noble, Atlanta, Ga.; "Pus Collections in the Pelvis," by Dr. C. N. Chavigny, New Orleans; "Five Recent Successful Laparotomies for Gunshot Wounds of Abdominal Viscera, Including One with Twenty-Eight Perforations of Intestines and Mesentery," by Dr. Robert W. Johnson, Baltimore.

WESTERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Thirteenth Annual Meeting, held at Denver, Dec. 28 and 29, 1903.

(Concluded from page 121.)

The Correction of Retrodisplacements of the Uterus.

DR. CHARLES W. OVIATT, Oshkosh, Wis., in a paper on this subject, showed a decided preference for the operation devised by DR. GEORGE H. NOBLE of Atlanta, Ga., and described in THE JOURNAL, Aug. 9, 1902, p. 302.

He mentioned the following advantages of this operation: 1. Through the one incision any pelvic complication may be

treated. 2. The operation utilizes the strongest part of the round ligament instead of its distal end. 3. The normal mobility of the uterus is not disturbed, and it is left in the pelvis where it belongs. 4. It causes no bladder irritation and no dragging because the traction on the ligaments is in the direction of their natural course.

The Surgical Treatment of Goiter.

DR. CHARLES H. MAYO, Rochester, Minn., in discussing this subject, said that it is probable that the lymphatic system acts as a duct to the thyroid, and a study of the function of the lymphatics would explain some factors in the etiology of diseases of this body.

The writer's experience was derived from 108 operations on thyroid tumors. Of these, there were 34 exophthalmic cases, with 6 deaths; 2 malignant, with 1 death; one large lingual thyroid. Two cases presented separated tumors of the pyramidal lobe. There were 71 cases of cystic, colloid, adenomatous and mixed types of goiter operated on, with one death, from pneumonia, on the eighth day. The recurrent laryngeal nerve was permanently injured once, and its function temporarily impaired several times.

He favored the Kocher collar incision, and if the capsule was found thickened over the local tumor, or whole gland, he advises enucleation by the Socin method. If the gland retained its general form, the largest lobe, usually the right, was extirpated, frequently leaving its posterior capsule to protect the laryngeal nerve. He preferred ether anesthesia, preceded by a hypodermic of morphia. Cocain had been used locally, where there was much tracheal disturbance or severe exophthalmic symptoms. He had usually observed some thyroidism one to three days after the operation.

Intestinal Perforation in Typhoid Fever.

DR. BYRON B. DAVIS, Omaha, said that a very large number of the operations thus far reported for typhoid fever had not been done until general peritonitis had been fully established, and that 50 per cent. of recoveries did not seem unreasonable, if operation was done before the advent of the peritonitis. He stated that a small per cent. of the cases dying after operation did not die from the operation *per se* or the perforation, but as a result of the general typhoid infection, and thought such cases should not be charged against the operation.

Three cases were reported. The first was operated on the third day after the perforation symptoms arose, death following twenty-four hours later. The second was operated on twenty-six hours after perforation, and was followed by death in eighteen hours. The third was seen only seven hours after the perforation occurred, and there was so much doubt about the diagnosis that no operation was done. In the last case he could not help thinking that frequent estimation of the hemoglobin and a red blood cell count might have been of material value in differentiating between intestinal perforation and hemorrhage.

DISCUSSION.

DRS. E. J. A. ROGERS, Denver, and VAN BUREN KNOTT, Sioux City, Iowa, both favored early operation in these cases, not waiting for a positive diagnosis.

DR. JAMES E. MOORE, Minneapolis, Minn., mentioned a case in which operation was performed on the third day after perforation had taken place. General peritonitis was present, yet the patient recovered.

DR. A. I. BOUFFLER, Chicago, was of the opinion that even in cases of doubt as to whether there was perforation or marked hemorrhage, operation was not necessarily fraught with serious danger.

DR. C. H. WALLACE, St. Joseph, Mo., recalled a case in which perforation had undoubtedly occurred. Operation was advised, but refused. An ice-bag was applied, peristalsis controlled, and, although the patient had pronounced shock, localized tenderness, etc., he recovered.

DR. H. A. SIPTON, Milwaukee, Wis., expressed the opinion that a careful examination would usually reveal perforation. The first case of perforation he operated on was in 1895, the diagnosis having been made within a few hours after perforation, and the operation resulted in a recovery. The second one occurred two or three years ago, the perforation in this case having been in the appendix. This case resulted fatally.

DR. CHARLES E. BOWERS, Wichita, Kan., said that perforation seldom, if ever, occurred higher than three feet above the ileocecal valve. One could shorten time very much by satisfying himself that it did not occur above that point.

DR. H. G. WETHERILL, Denver, called attention to the fact that erosion of the mucous membrane allowed transmigration of bacteria through the serous coat without actual perforation, and that this condition of things was, perhaps, more frequent than physicians had heretofore believed.

He thought the time was not far distant when the general practitioner would reach the conclusion which surgeons had pointed out, that a milk diet was not the best for typhoid fever patients.

Surgical Treatment of Nephritis.

DR. ALEXANDER HUGH FERGUSON, Chicago, made reference to the early history of this subject, and to the priority of the operation. He added three cases to those he had already published of renal decapsulation and puncture for active diffuse nephritis.

The indications for surgical treatment of this condition were pointed out at length, and the technic of the operation fully described.

The author thought that when the limitations of the operation were more clearly defined, and many of the extreme cases left alone, the mortality should not be more than 5 per cent. in the hands of experienced surgeons. He believed that the earlier an operation was performed in these cases, the less would be the fatality, and the greater the benefits.

Multiple Loose Bodies in the Knee-Joint.

DR. JOHN P. LORD, Omaha, Neb., reported the case of a middle-aged man who had suffered from recurrent attacks of arthritis, the result of loose bodies in the knee joint. As loose bodies in the posterior part of the joint were the chief offenders, it was thought best to make a transverse division of the patella and incision of the lateral and crucial ligaments, as in an operation for resection. This permitted full command of the articulation. Great difficulty was encountered in removing two of the bodies located behind the condyles. The patella was wired. The capsular ligaments were sutured with chromicized gut. Drainage was instituted and an interrupted plaster dressing applied. Union was primary, and a good result secured, although motion was limited. After two months the degree of flexion amounted to about 30 per cent.

Attention was called to the necessity of delaying manipulation after this procedure for fear of retearing of the immature union of the ligaments, thus rekindling the arthritis. After a period of two months, however, active efforts were made to restore function, with greater success, although it was probable that full function could not be regained after such extensive surgical trauma of disarticulation.

Median Perineal Prostatectomy.

DR. GEORGE E. GOODFELLOW, San Francisco, had operated by the median perineal route in cases of hypertrophy of the prostate approximately seventy-three times, without any immediate mortality, so far as he was aware. All of these operations were done under spinal anesthesia. Instead of making an incision, as he had previously described, from the base of the scrotum to the margin of the anus, he now made an incision an inch in length above the perineal center, and through this opening he could enucleate the prostate with his forefinger. If it was necessary to enlarge the opening, he did so in the usual way. But through an ordinary incision he had enucleated a prostate weighing 7½ ounces. In no case had he failed to secure anesthesia when he had entered the canal. The needle was inserted between the second and third lumbar vertebræ.

Complications and Sequelæ of Prostatectomy.

DR. JAMES E. MOORE, Minneapolis, stated that it was altogether too grave an operation to be resorted to as a routine

treatment for enlarged prostate, and was only applicable to properly selected cases.

The most frequent cause of death following this operation was uremia, consequently the most important preliminary examinations were those of the kidneys. The next greatest danger was sepsis, and in the presence of an infected bladder it was an ever-present one.

The most positive indication for operation was very often a complicating cystitis, and it was for the relief of this complication that the various palliative measures were most frequently employed. The only satisfactory treatment for this complication was drainage, and this was best brought about by perineal prostatectomy. Stone was a frequent complication of enlarged prostate, and should always be sought for and removed during the operation. The incision for a prostatectomy, when too extensive, caused various complications. Hemorrhage was an occasional complication, but its dangers had doubtless been overestimated. A serious objection to the suprapubic operation was the extensive injury done to the bladder; while the most difficult problem connected with the perineal operation was how to avoid injury to the rectum.

As sequelæ of prostatectomy, he mentioned impotence and incontinence or dribbling. A communication between the urethra and the rectum was one of the sequelæ met with occasionally. Epididymitis often followed prostatectomy, sometimes becoming so troublesome as to require the removal of the epididymis.

The author believed some failures were bound to follow this important operation, but that it was destined to be one of the greatest boons modern surgery had to offer suffering mankind.

DISCUSSION.

DR. ALEXANDER HUGH FERGUSON had operated on thirty-one or two cases without a death, without complications or sequelæ, but since then in operating on these cases a death would occur after every few cases. He had had four deaths, so far as he could determine, after having operated on forty cases. In only one of these was death due to the operation *per se*.

The discussion was further participated in by Drs. C. E. Ruth, Charles A. Powers, John P. Lord, Archibald McLaren, William Jepson, D. S. Fairchild, Donald MacRae, none of whom gave as roseate a view of the results following prostatectomy by any particular route as had been reported by some surgeons.

Resection of Arteries and End-to-End Union: Experimental Research.

DR. O. BEVERLY CAMPBELL, St. Joseph, Mo., detailed forty experiments on animals, in which different methods of operating were adopted.

His conclusions were as follows:

1. The death of the endothelial cells following injury to arteries and the addition of cell death incident to the trauma inflicted from operative measures for the repair of the injury probably furnished the necessary nucleo-albumin needed for the production of the chemical process of coagulation of the blood.

2. In the resection of arteries and in their suture in continuity, the suture should not penetrate the intima, as the additional death of endothelial cells incident to passing the suture and surrounding it from pressure necrosis might contribute to the coagulation of blood.

3. The most rigid aseptic technic should be followed in surgical work on the arteries.

Surgical Treatment of Pulmonary Abscess.

DR. VAN BUREN KNOTT, Sioux City, Iowa, stated that the physical signs common to pulmonary abscess in many cases were alone not sufficient to render its exact localization possible, and while one might be satisfied in a given case that the lung contained an abscess, and from the usual methods of examination had decided as to its location, this point should be corroborated by the aspirator before proceeding with the operation. Two cases of pulmonary abscess were reported.

The treatment of these cases by other than surgical methods promises little, and as the complications of gangrene, empyema and bronchiectasis so seriously increased the mortality, even in the hands of the best operators, it would appear that a plea made for early operative relief of patients suffering with pulmonary abscess was not inconsistent with the facts.

The Anatomy and Physiology of the Peritoneum and Their Relation to the Treatment of Peritonitis.

DR. ARTHUR E. HERTZLER, Kansas City, Mo., said the stomata were declared to be artefacts, for the reason that they occurred only when the peritoneum was treated with a silver nitrate solution. They did not appear when dilute solutions were injected into the peritoneal cavity of the living animal. Attention was called to the fact that the universal reference to the deposit produced when a serous membrane was treated with silver as an albuminate of silver was an error. No such substance existed. What was formed was in all probability a silver chlorid produced by the action of the chlorin in the fluid with the mercury in the silver solution, producing the stable silver chlorid. The peritoneum was covered by a layer of fat cells resting on a layer of elastic tissue. Below this were the blood and lymph vessels. Both systems always formed complete channels, and the lymph vessels never formed a connection with the peritoneal cavity. In the process of absorption from the peritoneal cavity the fluid must pass between the endothelial cells lining the peritoneal cavity, through the elastic layer, and between the cells lining the blood vessels. Whether the cells of each of these layers were united with the intercellular bridges could not be stated. The absorption of .7 per cent. NaCl solution took place more rapidly than any other solution. Salt solutions of more than 1 per cent. were absorbed more slowly. Certain solutions caused a transudation instead of being absorbed. Chief among these was formalin. It was effective in a dilution of 1/10,000. Absorption was likewise lessened by the production of an artificial hydremia. Normal NaCl solution might be used either by hypodermoclysis or per rectum, the former being the more rapid and certain.

Applying these researches to the treatment of peritonitis, the fallacy of normal salt irrigations was insisted on. By using this fluid the toxins were hurried into the circulation more rapidly. The logical treatment was to employ those means which retarded absorption. The production of an artificial hydremia might be accomplished either by the injection of the salt solution under the skin or per rectum. Formalin in the strength indicated was safe, as had been previously determined by intravenous injections.

Cholecystitis, with Special Reference to Etiology and Diagnosis.

DR. T. E. POTTER, St. Joseph, Mo., after reviewing the subject, said that the most probable cause of infection of the gall bladder was through the blood of the portal system; and from this source we not only had the catarrhal and parenchymatous inflammations, with occasionally empyema, but sometimes malignancy caused by the presence of stones.

Among the most prominent symptoms he mentioned tenderness immediately under the ninth intercostal cartilage, saying that this symptom was as valuable as tenderness in the region of McBurney's point in cases of appendicitis. This tenderness might extend down for two or three inches. To elicit it, one should press the fingers up under the ribs and require the patient to take a deep inspiration. The patient would complain of pain, and if the fingers were held firmly, the act of inspiration was instantly stopped as though there had been a sudden attack of pleurisy.

The Treatment of Posterior Perforations of the Fixed Portions of the Duodenum.

DR. J. E. SUMMERS, JR., Omaha, in a paper on this subject, said that retroperitoneal perforations of the duodenum were of such infrequent occurrence that little attention had been directed toward their treatment.

He believed it was almost impossible for a gunshot wound of either the stomach or duodenum, which perforated both walls, to be limited to those organs. Therefore, under such circumstances, in addition to the repair of any intraperitoneal

organs involved, proper incisions must be made to provide for retroperitoneal drainage.

DR. C. E. RUTH, Keokuk, Iowa, demonstrated the "Anatomic Treatment of Intracapsular Fractures of the Femoral Neck."

DR. DONALD MCREA, JR., Council Bluffs, Iowa, discussed "Portal Obstruction with Gastro-Intestinal Hemorrhage Following Operation."

DR. WILLIAM JEPSON, Sioux City, Iowa, spoke of "Primary Carcinoma of the Spleen and Its Treatment by Splenectomy."

A paper by DR. M. L. HARRIS, Chicago, on "The Use of Silver Foil to Prevent Adhesions in Brain Surgery," and one by DR. H. G. WETHERILL, Denver, on "Chronic Adhesive Sclerosing Peritonitis," will appear in THE JOURNAL.

Election of Officers.

The following officers were elected: President, Dr. Charles H. Mayo, Rochester, Minn.; first vice-president, Dr. H. D. Niles, Salt Lake City, Utah; second vice-president, Dr. L. L. McArthur, Chicago; secretary-treasurer, Dr. B. B. Davis, Omaha, Neb.

Milwaukee, Wis., was selected as the place for holding the next annual meeting; time, Dec. 27 and 28, 1904.

Therapeutics.

[Our readers are invited to send favorite prescriptions or outlines of treatment, such as have been tried and found useful, for publication in these columns. The writer's name must be attached, but it will be published or omitted as he may prefer. It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Ergot of Rye in Treatment of Chorea.

According to an abstract in *Amer. Medicine*, Eustace Smith recommends very highly the use of ergot in the treatment of chorea. He states that there is too great fear of giving overdoses of this preparation. He does not hesitate to give it in dram (4.00) doses of the liquid extract to children seven or eight years of age and repeating it every three or four hours, continuing it for weeks if necessary, and twenty-drop doses (1.30) may be kept up for months. The pulse rate decreases fifteen or twenty beats, but no dilatation of the pupils, headache, nausea, abdominal pain or other unpleasant symptoms have been observed. He, in some cases, increases the dose to one and a half drams (6.00) if smaller doses prove ineffective. The addition of one to three minims (.06-.20) of liquor strychnie (1 per cent.) to each dose of ergot seems to hasten the action of the ergot. He considers ergot, properly administered, to be a more reliable remedy than liquor potassii arsenitis. To obtain the results desired, the child should be kept in bed and the bowels kept freely open. This treatment should be kept up for some length of time after the symptoms have disappeared.

Pilocarpin in Pneumonia.

According to E. Curtin, in *The Lancet*, pilocarpin is of great value in relieving the breathing and pleuritic pain in pneumonia. It seems also to hasten resolution. Its effects are so produced by exciting glandular secretion. He administers it in one tenth (.0065) grain doses of the nitrate which will not cause perspiration, but rarely fails to reduce the temperature within an hour. It may be repeated without any untoward effects. It stimulates the flow of saliva and cleans the tongue. The patient should be kept warm during the administration.

Adrenalin Chlorid in Nasal Disturbances.

Adrenalin chlorid applied in the form of a spray or on pledgets of cotton, or in some cases dropped in with a medicine dropper, has been used extensively and to good advantage in nasal disturbance by S. G. Dobney, according to an abstract in *Med. Rev. of Reviews*. He has found it to be of great value in the treatment of hay fever, and other nasal neuroses producing transient obstruction due to swelling of the turbinates. Good results have also followed its use in acute rhinitis, thereby shortening the attack. It is superior to cocain, according to the author, in making a diagnosis between general hypertrophy of the nasal mucous membrane and a turgescence of the erectile tissues; in nasal operations, especially on the septum, its ability to check the hemorrhage is marvelous; however, in epistaxis it is of but little avail except when it consists of gentle oozing. He employs the following combination in the treatment of the foregoing conditions:

℞. Sol. adrenalin chloridi (1-100) ..... ℥i 30
Resorcini
Sodii chloridi, āā ..... gr. v 30
Aquæ destil. ..... ℥i 30

M. Sig.: To be used locally in the form of a spray or on pledgets of cotton.

Beaman Douglas recommends the following combination to be used in diseases of the nose and throat and for operative purposes:

℞. Cocainæ hydrochlor. ..... gr. v 30
Sodii chloridi ..... gr. x 65
Beta eucaine ..... gr. v 30
Ext. adrenalis ex sic. ..... gr. xxx 2
Aquæ ..... ℥i 30

Misce. Add the water to the dried suprarenal gland, filter and add the eucain and sodium chlorid and finally the cocain just before using. Sig.: Six minims to be injected beneath the membranes or applied locally on membranes by means of an applicator.

Acute Eczema.

In the treatment of acute eczema, according to Bjorkman in *Merck's Archives*, if it is localized, a moist dressing should be applied containing 2 per cent. of boric acid or a dressing saturated with a solution of aluminum acetate (1-10).

If the eczema covers larger areas a dusting powder is of value, as follows:

℞. Zinci oxidi
Pulv. amyli, āā ..... ℥iiss 10
Talci venet. ..... ℥vi 24

M. Ft. pulvis. Sig.: To be used locally several times a day.

As a salve in these forms of acute eczema the following is of service:

℞. Bismuthi subnit. ..... ℥i 4
Lanolini ..... ℥ii 8
Liq. petrolati q. s. ad ..... ℥iii 60

M. Ft. unguentum. Sig.: Apply locally; or:

℞. Acidi salicylici ..... gr. x 65
Zinci oxidi
Amyli, āā ..... ℥iiss 10
Liq. petrolati q. s. ad ..... ℥i 30

M. Ft. unguentum. Sig.: Apply locally.

If the pruritus is pronounced the following lotion containing carbolic acid will be of assistance in checking the itching:

℞. Acidi carbol. ..... gr. xx-xxv 1.30-1 65
Aquæ rosæ
Aquæ destil, āā, ad ..... ℥iii 90

M. Ft. lotio. Sig.: To be externally applied; or as a salve the following to relieve the pruritus:

℞. Acidi salicylici ..... gr. vi 36
Menthol ..... gr. xi 70
Olei lini
Aq. calcis, āā, ad ..... ℥ii 60

M. Sig.: To be applied locally.

Another very effective combination is:

℞. Ichthyol.
Zinci oxidi, āā ..... ℥i 4
Lanolini ..... ℥iii 12
Liq. petrolati ad ..... ℥i 30

M. Ft. unguentum. Sig.: Apply locally.

Erysipelas.

In *Med. Rev. of Reviews* Smolitcheff states that erysipelas can be treated locally with success by employing a remedy which is readily absorbed by the skin, and which is powerful enough to kill the active organism, the streptococcus, or at least to prevent its further activity. The remedy must at

the same time, when taken up by the circulation, neutralize existing toxins and fortify the cells against their invasion and producing at the same time a leucocytosis. To fulfill such requirements he recommends the alcoholic tincture of iodin as a specific comparable to the effects of quinin in malaria. This preparation diminishes the swelling and pain and causes a drop in the temperature. The following combination is recommended by the author:

R. Tinct. iodi	℥vi	24
Olei camphoræ		
Ichthyol, āā	℥iii	12

M. Sig.: Shake and apply locally twice or three times a day.

Glycerinate of Tannin in Burns.

According to an abstract in *Med. News*, the glycerinate of tannin has been found to be a most satisfactory preparation in the local treatment of burns. If the burns are of the second degree the vesicles should be punctured and the fluids removed, after which glycerin and tannin should be applied in 50 per cent. solution and covered by sterilized gauze and cotton. The solution should be applied several times a day without changing the gauze. Burns of third degree should be treated likewise. The good results are ascribed to the effects of the tannin on the diseased tissue, coagulating the albuminous substances and forming a protective coating, also the glycerin is an antiseptic.

Otitis Media.

Patients suffering from acute otitis media must be kept indoors, according to *Kan. City Med. Rec.*, and given a purgative. Every two hours the temporal and mastoid regions and the ear should be covered with a compress dipped in a solution of sodium bicarbonate (60 parts to a 1,000) as hot as can be borne by the back of the hand. The whole may then be covered by a piece of oiled silk and held in place by a bandage. Previous to applying the compress three or four drops of the following solution may be dropped into the ear:

R. Cocaine hydrochlor.	gr. iss	09
Resorcini	gr. xii	75
Glycerini (neutral, sterilized)	℥iiss	10

M. Sig.: Three or four drops instilled into the ear at every second dressing. Three or four times during the day the child should be placed on the bed with the head low and a few drops of the following combination instilled into each nostril:

R. Menthol	gr. iv	25
Olei amygdalæ dulcis	℥i	30

M. Sig.: To be introduced into the nares by means of a medicine dropper three times daily.

The mouth and pharynx should be thoroughly cleansed and irrigated three or four times daily with boiled water and introduced with a fountain syringe. If the pain does not cease within a day or two and the tympanum becomes bulged and red, paracentesis should be performed.

To serve as an astringent, the following is recommended by the author:

R. Acetanilidi		
Bismuthi subnit., āā	gr. xxiiss	1 50
Ung. zinci oxidi		
Ung. aq. rosæ, āā, ad	℥i	30

M. Ft. unguentum. Sig.: Apply locally; or:

R. Alumnol	gr. xxiiss	1 50
Ung. aq. rosæ ad	℥i	30

M. Sig.: Apply locally.

Gerhard recommends the following in relieving the pain in acute otitis:

R. Tinct. aconiti rad.	℥iss	6
Glycerini (sterile)	℥iiss	10

M. To be warmed and two or three drops instilled into the ear.

The following combination is also employed in relieving earache:

R. Ichthyol	m. xv	1
Glycerini		
Aquæ, āā	℥iii	8

M. Sig.: Warm and drop a few drops into the ear three times a day.

Hypophosphites in the Treatment of Abscesses.

Sinclair Tousey, in *Annals of Gyn. and Ped.*, recommends the employment of hypophosphite of calcium, sodium and potassium in the prevention and treatment of abscess formations. He recommends it in that class in which there is no evidence of virulent infection, but simply a swelling of the subcutaneous tissue presenting well-marked fluctuation without redness or pain, such as may occur in the axilla, perineum or about the neck. In the treatment of such conditions he recommends the following combination as being the most effective one:

R. Calcii hypophos.	gr. v	30
Sodii hypophos.	gr. ii	12
Potass. hypophos.	gr. ii	12

M. Ft. capsula No. i. Sig.: One such three times a day.

If preferable the foregoing may be taken in the form of a syrup. This combination is preferable to those containing iron or strychnin.

Therapy of Iron.

After studying a large number of cases, including the various forms of anæmia and estimating the amount of hæmoglobin and the number of corpuscles, Biernacki, in *Internat. Med. Mag.*, concludes that only in chlorosis is the administration of iron of real value. In other forms of anæmia nothing can be expected from its use. He states, particularly, that the large number of neuropathic individuals, though pale and having the symptoms of anæmia, show no real impoverishment of the blood and are injured rather than benefited by iron medication. Consequently he condemns the widespread custom of prescribing iron in cases of pallor without a proper examination of the blood. When indicated, as in chlorosis, iron should be given in large doses. No benefit can be expected from the use of the chalybeate waters.

Medicolegal.

Cause of Disease a Matter of Expert Opinion.—The Supreme Court of Tennessee says, in Mayor and Aldermen of Knoxville vs. Klasing, that it is, and from the nature of the case must be, a matter of expert opinion as to what is the cause or origin of disease, and the testimony of physicians is the most reliable evidence that can be had on the subject.

Damages Recoverable for Malpractice.—The Supreme Court of South Dakota holds, in the malpractice case of Baxter vs. Campbell, that, there being nothing in the complaint or in the evidence from which malice might be presumed, an instruction authorizing the imposition of exemplary damages was seriously prejudicial to the physician sued. The writer of the opinion (Justice Fuller) says that, so far as his research has extended, the damages awarded in actions of malpractice are compensatory, and that the South Dakota statute provides for exemplary damages only as a means of punishment "when the defendant has been guilty of oppression, fraud or malice, actual or presumed." In order to justify the imputation of malice, within the rule of punitive damages, the injury must have been conceived in a spirit of mischief, and partake of a criminal or wanton nature. As exemplary damages are penal in character, and malice an ingredient of crime, no one should be adjudged to pay "smart money" without first being accused of something malicious, and given an opportunity to defend. When exemplary damages are predicated on malice, the party sued is entitled to know from the complaint what acts, omissions, or circumstances are relied on to constitute the gravamen of the charge, and the instructions of the court should be confined to the case as made by the evidence. Where both actual and exemplary damages are claimed, it has been considered necessary to allege each in a separate count or cause of action; but under the liberal practice of South Dakota a complaint is deemed sufficient to admit the proof when it reasonably appears from the recitals thereof that the damages alleged were maliciously occasioned. According to an elementary rule, instructions concerning exemplary damages, though properly alleged, should never be given unless evidence applicable thereto has been introduced.

Constitutionality of Compulsory Vaccination Laws.—The Second Appellate Division of the Supreme Court of New York says that, in the case of Viemeister vs. White, where the first-mentioned party sought to compel the admission of his child to a public school without the submission of the latter to vaccination as required by the state statute, attention was called to various provisions of the state constitution in an effort to establish a conflict between the statute and the fundamental law. First among these provisions, was one that, "The legislature shall provide for the maintenance and support of a system of free common schools, wherein all the children of this state may be educated." But the court is of the opinion that the constitution did not intend to change the practice and policy of the state in reference to the schools, but merely to insure a continuance and an extension of the privileges of citizens of the state, and that the legislature has a right to impose any reasonable regulations on this privilege which operate equally on all persons in the same class and under the same conditions. Continuing, the court says that it may be conceded that the legislature has no constitutional right to compel any person to submit to vaccination; but where the state grants a privilege it has the right to determine the conditions on which it may be enjoyed; has a right to regulate the privilege in the interests of the fullest enjoyment by all; and, so long as this regulation does not operate to deprive any member of the state of "any of the rights or privileges secured to any citizen thereof, unless by the law of the land or the judgment of his peers," there is no ground on which the statute may be declared null and void. The vice against which this constitutional limitation was directed was partial legislation—legislation which operated, not on the legislators and their immediate constituents, but on limited numbers of people. If the statute in question is not justified, if it is not wise or proper to impose the condition there named, it must be presumed that the legislature will in the future remedy the wrong. It can not be done by the courts. The statute violates no specific guaranty.

Board of Health, Health Officer, Typhoid Fever, Etc.—The Supreme Court of Michigan says, in the case of Cedar Creek Township vs. Board of Supervisors of Wexford County, that in the year 1900 sundry expenses were incurred by the health officer of the township. It did not appear that this was expressly authorized by the board of health, but the items were allowed by the said board of the township, and were then presented to the board of supervisors, which disallowed them. The claimants—i. e., the persons who furnished the services and other items—then presented them a second time to the board of health of the township, and they were allowed and paid by the township. Thereafter the township presented an itemized statement of the claims to the board of supervisors for payment, and they were again disallowed. The items presented were for expenses alleged to have been incurred in the care and treatment of typhoid fever cases within the township. The statute at the time provided that when any person should be infected with smallpox or other sickness dangerous to the public health, the board of health of the township where such person might be should make effectual provision in the manner in which they should judge best for the safety of the inhabitants by providing nurses and other assistance and necessaries, etc., which should be at the charge of the person himself or those liable for his support, if able; otherwise as a charge of the county; provided, that the health board should keep and render an itemized and separate statement of expenses incurred in so caring for each person. The health board, the Supreme Court says, has large discretionary powers, made necessary by the fact that it is an emergency board. When it has reason to fear danger from diseases which are generally recognized as communicable and dangerous to the public health, a court may be justified in taking judicial notice that the disease is within the statute, which in plain terms includes all diseases where there is danger to the public health from a threatened spread of the disease. Within reasonable bounds, at least, it says, the health officer's conclusion that a disease is communicable, and is a menace to public health, must be conclusive; otherwise the efficiency of health officers and boards would be seriously lessened, for persons would be likely to hesitate about furnishing necessary medicines and other commodities and rendering services if it involved the danger of review by another board, with power to disallow claims on the ground that the disease was not within the statute, or the goods furnished were not necessary. And the court is of the opinion that the allowance by the township board of health, which is identical with the township board in townships, was designed to be final, and where the law imposes the liability on counties it was intended that the allowance by the township board should bind the board of supervisors as to the character of the disease, the necessity, and the fitness of the articles and services furnished and rendered, as well as the fact that they were furnished. The question of the ability of the patient to pay is also foreclosed by the allowance by the township board. While the board did not keep, in a book of its own, an account of items furnished each person, the court holds that it was a sufficient compliance with the statute that they had before them and allowed such itemized accounts, and rendered such an account in this case. The requirement to keep and render an account was met when the board was able to render the itemized and separate statement required by statute. There was a bill for $149.50 for attendance on patients and consultation with other physicians allowed to the health officer of the township. While no direction to perform these services was given by the board, the court deems it enough that they knew that they were being rendered, appeared to have acquiesced, and afterward allowed the bill.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.
January 2.

1 *A Plea for Justice to the Consumptive. S. A. Knopf.
2 *The Diagnostic Significance of Certain Reflexes and Tendon Phenomena. H. Oppenheim.
3 *Commentaries on Lues and Leprosy as Subcatabolic Diseases. Homer Wakefield.
4 *Diagnosis of Acute Lobar Pneumonia. Stephen Smith Burt.

1. **Tuberculosis.**—Knopf's paper is a plea for the tuberculous patient as against the too prevalent phthisiophobia of the day. He severely criticises the action of the New York Legislature in enacting the Goodsell-Bedell law against the establishment of sanatoriums for this class of cases, and the decision of the Marine Hospital Bureau making tuberculosis a dangerous contagious disease. He also gives especial attention to one or two recent papers which have charged victims of tuberculosis with possessing criminal tendencies, and brings forward evidence from high authorities against any such statement. The paper concludes with the resolutions proposed in the Society of Medical Jurisprudence against the above-mentioned enactment.

2. **The Diagnostic Reflexes.**—Oppenheim first notices the almost universal occurrence of the knee phenomenon and its importance. It is only in especial cases and mainly in degenerates that it may be absent, though there may be mechanical conditions preventing its recognition, such as a great development of fat, shortness of patellar tendon, etc. The heel phenomenon is now recognized as a constant reflex in health, but exceptions occur to a somewhat greater degree than with the knee phenomenon. Sciatica, for instance, may prevent it, especially sciatic neuritis, and the mechanical conditions above noticed. Alcoholism, diabetes, and other affections, may cause its disappearance, so that it is not of invariable significance as a symptom of spinal disease. As to the skin reflexes, he notices particularly the occurrence of the Babinski reflex in certain spinal disorders, but recognizes also that it is not of invariable occurrence. It is occasionally found in atonic conditions of the musculature, as well as the hypotonic. Coincident lesions of certain cerebral tracts or areas may prevent its occurrence, nor can we assume that its appearance indicates an anatomic change in the pyramidal tracts, as it may be occasionally demonstrated after epileptic attacks. Peripheral

disease or poliomyelitis with paralysis of the toes may also prevent its appearance. In conclusion, he calls attention to a phenomenon which in significance is very close to the Babinski phenomenon and which he himself first observed and described. In a normal individual, on stroking the inner surface of the leg from above downward, with either the thumb or the handle of a percussion hammer, or pinching a fold of skin on the inner surface of the leg, either no reflex movement will follow or a flexion of the toes will result. Under pathologic conditions, that is, in pyramidal involvement, instead of the plantar flexion of the toes, dorsal flexion is observed. This reflex differs from the Babinski not alone in the source of its inception, but in the fact that not only the extensor hallucis longus participates in the reflex movement, but also the tibialis anticus and often the extensor digitorum communis and the peronei. The contraction of the extensors for the foot is physiologic when examining the plantar reflex, and the pathologic reflex is only known through the contraction of the extensors for the toes, whereas in Oppenheim's reflex the pathologic reflex is more plainly indicated by the involvement of other muscles. In a few cases where the estimation of the toe reflex is uncertain, the Oppenheim reflex may be decisive.

3. Subcatabolic Diseases.—Wakefield includes syphilis and leprosy as coming under his class of subcatabolic conditions described in an earlier paper abstracted in THE JOURNAL, Dec. 13, 1902, ¶13, p. 1549. He brings forward lengthy arguments in favor of his views, asserting that the rational basis of treatment in every case must be the restoration of normal catabolism and the elimination of accumulated and decaying refuse of past subcatabolism and not an attempt at independent parasitic destruction.

4. Pneumonia.—Certain difficulties in the diagnosis of aberrant pneumonia are noticed by Burt, and he remarks that only a frequent examination and chest exploration of all patients where there is a possibility of idiopathic, intermittent or terminal pneumonia will reveal the true condition. The ordinary typical signs of pneumonia may be absent. He points out more particularly the difference between pneumonia and typhoid and pleurisy. Of course, beside the agglutination test, bacteriologic examination offers valuable aid, and bacteriologic examination of the blood may yet be of extreme diagnostic value where the pulmonary signs are indefinite and there is no expectoration.

New York Medical Journal.

January 2.

5 *Gallstones. Their Surgical Treatment. B. Farquhar Curtis.
6 *The Surgical Treatment of Malignant and Non-malignant Diseases of the Stomach. Albert Vanderveer.
7 *Hysterectomy for Infectious Disease of the Uterus and Uterine Appendages. H. C. Deaver.
8 *The Treatment of the Cardiac Toxemia of Pneumonia. Henry L. Elsner.
9 *Some Investigations of a Bacterial Treatment of Tuberculosis. (To be continued.) Stephen J. Maher.
10 *The Surgery of the Day. Charles B. Kelsey.
11 *The Ocular Complications of Mumps. J. H. Woodward.

5. Gallstones.—Curtis sums up the advantages of operation before grave infection has taken place in: (1) The avoidance of such accidents and the improvement of existing inflammatory conditions; (2) the removal of the stone before it enters the common duct, with the dangerous consequences likely to follow; (3) the prevention of severe attacks of colic and cystitis; (4) stoppage of calculus formation; (5) the fact that latent cases are by no means free from danger, so that recovery from one attack of colic is no evidence that another one will not occur or that other stones may not remain behind or chronic cholecystitis persist; (6) it seems to be the general experience that in the latent cases while the patient does not have symptoms pointing directly to the bile passages, they are afflicted with various dyspeptic complaints which can be entirely and completely removed by operation.

6. Stomach Surgery.—Vanderveer describes the methods of operation in stomach surgery, more especially gastro-enterostomy, and gives his own conclusions based on a variety and number of operations as follows:

1. Gastroenterostomy can be applied to all kinds and conditions of stenosis of the pyloric end of the stomach.

2. It is a preferable operation to that of resection of the stomach, in many cases, the immediate mortality being less and the possibility of the extension of life being quite as great, with as much comfort.

3. Next to gastroenterostomy I believe gastrectomy to be the most reasonable and satisfactory operation, yet this operation will necessarily be limited to but few cases. In doing it great attention should be paid to removal of the lymphatic glands, as in this rests much of the permanent success of the operation and non-return of the malignant growth.

7. Pelvic Infection.—Deaver notes the progress of post-partum uterine infection, and protests against the practice of aspiration through the vagina in cases of pelvic abscess, as the needle may enter the intestine. A better procedure is to open freely the cul-de-sac by an incision through the posterior vaginal vault. Where the collection is so placed that it can not be reached by such incisions he keeps the case under the closest observation with careful feeding and the avoidance of purgation. If the collection is in the upper part of the broad ligament and it is doubtful whether it can be reached by incision above Poupart's ligament, he makes an incision in the median line, just above the upper margin of the mass and carefully inspects its relation to the abdominal wall and viscera, and then packs with gauze above and to each side and evacuates without danger of soiling the peritoneal cavity, mopping out with iodoform gauze, exercising care not to destroy any adhesions. Where the infection has passed into the tube, forming a pyosalpinx or tubo-ovarian abscess, he always operates by the abdominal route, tying off the ovarian vessels as close to the pelvic wall as possible, and rapidly excising the tube and ovary with scissors, following the incision right into the horns of the uterus, and closing the resulting wound with continuous suture. He drains with gauze placed along the line of suture. In still another class of cases where the infection appears as a phlebitis of the uterine sinuses and veins of the broad ligament, with multiple abscesses and acute peritonitis, pronounced constitutional symptoms, diarrhea, etc., the question of hysterectomy presents itself. In most of these cases total hysterectomy is to be preferred. Early operation can save the patient in some of these highly-virulent and rapidly-fatal forms of septic peritonitis which are similar to the fulminating forms of appendicitis, and surgery must be performed. In infection from gonorrhea and dermoid cysts and from interligamentary and ovarian cysts, he is in the habit of performing supravaginal hysterectomy. He considers it in badly infectious cases with dense adhesions the ideal operation, since it thoroughly removes all the diseased condition. The floor of the pelvis is left with a serous covering by neatly stitching the apposed serous surfaces together.

8. Pneumonia.—The prime factor in pneumonia is a toxemia with obstruction in the pulmonary circuit. This leads to cardiac asthenia with a liability to marked changes in the right heart and far-reaching degenerative changes in the muscle, with heart clots and vasomotor paralysis. The treatment must be prompt, radical and sustaining. Elsner protests against the indiscriminate use of nitroglycerin in these cases, as it aggravates the lowered arterial tension from paralysis of the vasomotors. There are three remedies which promptly meet the indications. These are strychnia, digitalis and suprarenal extract. The first two should be used hypodermically. The latter acts on the heart and the blood vessels favorably, and not on the vasomotor center, and may be used to assist strychnia. He quotes from a former paper in regard to the use of diffusible stimulants in these cases. Compound spirit of ether, aromatic spirit of ammonia, compound spirit of lavender and tincture of valerium are recommended, giving 15 drops of each every fifteen minutes, and also doses of caffein and spartein sulphate, ¼ grain of the latter and 4 to 6 grains of the former, every two, three or four hours. In the faithful administration of ethereal stimulants he has great confidence, and some of his colleagues have had equally good results.

9. Tuberculosis.—Maher's article, of which only the first part appears in this issue, is of interest. He describes his experiments with a special bacillus cultivated from the whey of the milk of a consumptive cow, and his employment of its

cultures in the treatment of cases of tuberculosis, apparently with decided advantage. Several cases are reported. The bacillus seemed to be very long lived, as cultures survived in stoppered bottles for four years or more. He suggests as a remedy for this disease pure cultures of this bacillus, which he calls his X bacillus, given by injection. It is a spore-producing, gelatin-liquefying germ, growing in the presence or absence of air, in acid or alkaline media, at room or blood temperature, and seems to be hostile to other bacterial forms. Rabbits were inoculated with pure cultures without harm, whether in the tissues or veins, or abraded areas. (The article is to be continued.)

10. **Surgery of the Day.**—Kelsey criticises the postgraduate schools, not that they do not furnish good instruction, but as teaching to those incapable of understanding and with no restrictions as to their use of it. He hints that students who attend postgraduate schools should be required to present some evidence of qualification, and that the schools should be placed under legislative control.

11. **Ocular Complications of Mumps.**—Woodward reviews the findings of various authorities as regards the ocular sequels of mumps, and reports a rare case of optic neuritis following the disease.

American Medicine, Philadelphia.
January 2.

12 *The Early Diagnosis of Arteriosclerosis. Alfred Stengel.
13 *A Bacteriologic Investigation of Commercial Vaccine Virus. William T. Howard, Jr., and William E. Weir.
14 *The Methylene-blue Eosin Stains. Walter Baumgarten.
15 *Some Remarks on the Etiology of Hyperplasia of the Pharyngeal Tonsil in the Light of Recent Investigations. Thomas J. Harris.
16 Percentage Solutions, with Reference to the Metritic System. Joseph W. England.
17 *Seasickness: Etiology and Prophylaxis. R. Kirkland Shelmerdine.
18 *The Morbid Anatomy and Histology of Pulmonary Tuberculosis in Relation to Its General Pathology and Clinical Manifestations. G. Sims Woodhead.

12. **Arteriosclerosis.**—Stengel discusses the causes of arteriosclerosis, such as nervous strain, overwork, alcoholism, overfeeding, metal poisoning and infectious disease, especially syphilis. He thinks overfeeding as a cause has been neglected by physicians, as he has known a number of cases where no other factor was ascertainable. Heredity, of course, must not be lost sight of. The importance of early recognition is obvious, and he remarks as to the effects of loss of elasticity of the blood vessels on the heart. The four principal symptoms he mentions are the character of the first heart sound, its lengthening and heaviness; the accentuation of the second heart sound, a tendency to increase of what is called the "tidal" wave, and the determination of blood pressure. These, however, are not found in arteriosclerosis alone. He does not accept von Basch's opinion as to the importance of the persistent increase of blood pressure as a symptom of arteriosclerosis. Among the early clinical symptoms are change of vigor and of color and the various evidences of reduced vitality, an alteration of the skin, and of the activity of the sweat glands. Usually they are inactive, but there is sometimes a tendency to abnormal sweating. Increase in the total amount of urine is an early symptom, and variations in its specific gravity may also be noticed. The morning urine may be 1.025 and the evening urine 1.005 to 1.01. Later, occasional or continuous slight albuminuria appears. When the heart is especially affected there may be various phenomena of myocardial degeneration, arrhythmia, increased force of the apex impulse and suggestions of dyspnea. A tendency to ascribe irregularity of the heart in persons over forty to the overuse of tobacco, alcohol, coffee or tea is remarked on; more frequently it is the result of changes in the arterial system and the heart. Neither cause should be considered without the other. He finally calls attention to ophthalmic examination showing thickening of the retinal arteries.

13. **Vaccine Virus.**—Howard and Weir give the results of examinations of vaccine virus in Cleveland, showing the percentages of contamination. A rather notable point is that the virus obtained in the open market, as was that of Rosenau, showed much more contamination than that obtained from the dealers direct. The 9 varieties of actinomyces isolated will form the subject of a second paper. Few of them conform to the descriptions of previously recognized types, and none of them has caused suppuration or actinomycotic nodules in laboratory animals. This, however, the authors do not think is of importance, as such a result is rare in any case.

14. **The Methylene-Blue Eosin Stain.**—Baumgarten's paper is incapable of analysis in reasonable space. The first part is largely historical. The latter part contains the formulæ and methods of making a number of these stains. It will be an interesting paper of reference for the laboratory worker.

15. **The Pharyngeal Tonsil.**—The causes of enlargement of the pharyngeal tonsil are sometimes obscure. Heredity seems to play a limited rôle, and in a certain proportion of cases tuberculosis may be of importance, but syphilis seems to be of little account. The association of scrofula and struma is discussed at some length by Harris, and he notices the generally-conceded occasional factor of inflammation also at some length. He offers the results of his study in the following conclusions:

1. The pharyngeal tonsil possesses a distinct function or functions. 2. This function is of the nature of a defense against the entrance of bacteria and consists in a certain irrigation of the tonsil surface by a lymph stream loaded with lymphocytes. 3. This protection function carries with it the inherent qualities of the tonsil to enlarge on the slightest irritation for the affording of further power of defense. 4. This inherent tendency of the tonsil to enlarge is further seen in the frequent recurrence of the tonsil after removal. 5. Strictly speaking then, in the great majority of cases such enlargements are not a pathologic, but a physiologic process.

17. **Seasickness.**—Seasickness, according to Shelmerdine, is the result of three factors acting together or independently —mechanical, mental and the irritating action of the bile in the stomach. The mechanical action is from the constant change in position of the center of gravity, throwing unusual work on the antagonist muscles. Lack of loss of consciousness of involuntary effort has also an effect. The bile ducts are often overfilled, and the shaking up forces it into the intestinal tract, which is possibly suffering from constipation. The bile is often forced back into the stomach in enormous quantities. He summarizes that the pathology of seasickness is first in the presence of bile as a foreign body in the stomach; unnatural, spasmodic, muscular contractions, excessive spasmodic elevations of the chest and diaphragm, and compression of the contents of the abdomen—all causing a negative pressure in the stomach. Nervousness hinders the acquirement of proper balancing powers. He advises prophylaxis by a thorough cleaning out of the system before going on board ship, the use of laxatives, etc. In certain cases of very persistent vomiting, strapping of the chest, which thus restricts its expansion, will tend to quiet it. Calomel in large doses followed by a stiff saline is an excellent remedy, and the bromids may be used if these will stay down. In all cases the bile must be worked off. A seasick person should stay out in the fresh air and should not attempt to resist the motion of the vessel, but co-operate with it. Sea-legs and seasickness are incompatible.

18. **Tuberculosis.**—After some introductory remarks Woodhead takes up the subject of the curability of tuberculosis and refers to the observations of others that tubercular healed foci are frequently found in the lungs of elderly people dying of other diseases. His attention having been drawn to this fact, he took up the search for such evidence and found it in at least one in every three cases that came under his examination. He soon became convinced that even in cases that succumb to tuberculosis there is more or less marked evidence of sturdy resistance, and that failures to meet the attack were due to disadvantageous circumstances. While he holds that the tubercle bacillus is the origin of the disorder, he warns against the assumption that its contact with human tissues necessarily results in tuberculous disease. The tissues must be damaged or weakened and a special mode of entrance be prepared before the tubercle bacillus can do its mischief. For years his hands have been almost daily soiled with the tubercle bacillus, and he has no doubt he has swallowed many and some have made their way into his respiratory tract, but they have never done him any apparent harm because he has carefully

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protected abrasions and cuts, and refrained from active pathological work when out of health. There must be some predisposing cause, a soil must be prepared. The routes of the bacillus to the lungs are by way of the air passages and by the lymphatic system. Woodhead points out the resistance of the tissues by throwing out of fibrous tisque, which is an evidence of good reaction. The third way of invasion of the organs by tubercle germs is by the blood. The bacilli are carried from the lesions of the lymphatics to the blood vessels, but all of the three routes are probably more or less coincident; these methods seldom occur alone. In case of phthisis, apical catarrh is generally the first condition noticed, accompanied by congestion and consolidation. If the patient is placed under favorable conditions of nutrition, rest and elimination, the reaction of the tissues is so complete that the dead patch is surrounded and cut off, and if not extensive may be completely cured. Under other conditions, however, it will spread. The small hemorrhages characteristic of the early stage of phthisis are explained by the altered conditions of the vascular circulation, the increased quantity of blood required to meet the want of the proliferating tissues, and they usually occur as the result of some extra temporary strain, and are an indication of the local changes. A patient that has once suffered from tuberculosis has no immunity to subsequent attacks, and we should insist on a continuation of the improved conditions which is advised for the first attack. These, however, Woodhead holds, can be provided by the patient himself in many cases. While sanatorium treatment is of great value in tiding over dangerous early periods of the disease, it is still more valuable in teaching the patient to carry out in his own home the same principles and methods. If he is sent to a special climate, he is apt to give the credit to the climate, and while this may be a factor, there is no fundamental difference between one climate and another as regards the curability of phthisis aside from the greater facilities afforded for open air and pure air treatment.

Medical News, New York.

January 2.

19 *The Management of Typhoid Fever Epidemics. George A. Soper.
20 *Anomalies and Difficulties of Diagnosis in Typhoid Fever. Henry L. Elsner.
21 *Management and Treatment of Typhoid Fever. Egbert Le Fevre.
22 Thoughts on Chlorine and an Antiseptic Technic. Douglas H. Stewart.
23 *Excision of the Frenum Preputii Following Laceration During a Suspicious Intercourse. Charles C. Miller.
24 *Chickenpox Concurrent with Smallpox. Philip D. Bourland.
25 *Morbid Anatomy and Histology of Pulmonary Tuberculosis in Relation to Its General Pathology and Clinical Manifestations. G. Sims Woodhead.

19. **Typhoid Fever Epidemics.**—The duties of the medical boards of health in case of typhoid fever epidemics are enumerated by Soper, who regrets the lack of scientific training in hygiene among physicians. He comments on the value of state oversight in even a local epidemic, as the authority of local boards does not go beyond their municipal boundaries. The number of cases should be thoroughly ascertained and special care taken to detect the mild, unusual and atypical cases, as from these is the greatest danger of spreading. The care of food supplies, use of disinfectants, proper safeguards against urinary infection, etc., are all noted.

20. **The Diagnosis of Typhoid.**—Elsner notices the anomalous cases of typhoid where the symptoms are difficult to determine, some stages of the disease being lacking, the prodromal period being unusually short, etc. The condition of the blood pressure is also noticed and its value, the absence of chills in many cases and of nose bleed, which used to be considered a cardinal symptom, and the possible complication of typhoid fever with other conditions. Malignant endocarditis is often confused with typhoid, as is also gonorrheal endocarditis. The peculiar characteristics of infantile typhoid, usually the shortness of the course due to the absence of extensive deposits in the submucous intestinal tissue, lesser involvement of the glands, etc. He believes that idiopathic remittent fever in children is almost universally enteric. Of course, the value of reaction tests and blood examination must not be overlooked.

21. **Treatment of Typhoid.**—Le Fevre principally emphasizes the importance of individualizing in the treatment of typhoid, and the too common dependence on routine methods.

23. **Excision of the Frenum.**—Miller advocates excision of the frenum in a case of its rupture, especially after suspicious intercourse. He would extirpate it with small curved scissors, and, as the result of extirpation, we have a groove about one-eighth of an inch deep and somewhat wider, which is sutured from up near the meatus back to the corona with continuous catgut sutures. Free oozing will commence, but the sutures quickly control it. The groove unites very rapidly, and if plain No. 1 catgut is used for suture material no further attention is required. It comes away in a few days, leaving the parts healed.

24. **Smallpox and Varicella.**—Bourland gives his experience with an epidemic of smallpox and the concurrence of chickenpox in Lake Linden, Mich., and emphasizes the following points:

1. The concurrence of smallpox in no way caused the course of my cases to depart from that typical of chickenpox.
2. Vaccinated and unvaccinated children showed equal susceptibility to infection, and the course of the sickness was the same in each class. This fact excludes varioloid.
3. None of my patients had ever been exposed to smallpox or had ever had it.
4. No adults were attacked notwithstanding absence of vaccination in a majority.
5. Five of the children exposed had had chickenpox in a previous epidemic, these previous attacks conferring immunity except in one instance.
6. Smallpox and chickenpox are distinct pathological entities, and though in intimate association, neither disease influences in any way the natural history of the other.

25.—See also paragraph 18 above.

Boston Medical and Surgical Journal.

December 31.

26 *Typhoid Fever in Children. (To be continued.) Adolf Baginsky.
27 *Acute Flexion of the Gall-bladder as a Cause of Biliary Colic. Its Relief by Operation. A. T. Cabot.
28 *Some Remarks on Chronic Sphenoidal Sinusitis. Albert H. Rogers.
29 The Case of Louis Bitzer. Edward B. Lane.
30 A Brain Hardened by Kaiserling's Method Showing the Track of a Bullet. Wm. F. Whitney.
31 What Was the Cause of Death? A. Elliott Paine.
32 A New Frame for the Treatment of Fractures of the Lower Extremities. John H. Cunningham, Jr.

26. **Typhoid Fever in Children.**—Baginsky reviews the history of typhoid fever in children as it has been recognized in medicine, noticing that it was formerly considered to be a comparative rarity, but has of late years become known to be of greater frequency and of special interest. It is apparently more rare in infancy than in early childhood, but this is very likely an error of diagnosis, as typhoid in sucklings is often diagnosed as dyspepsia. Further and accurate observation will be required to settle this question. Boys seem to be more susceptible than girls, which Baginsky refers to their greater chances of infection. Typhoid in children is exceedingly easy to transmit, as they are naturally more careless about soiling surroundings. He comments on the probability of its being carried by flies as Vaughan has claimed, and which, he thinks, he has himself observed almost to a certainty. While the greater number of cases occur in the autumn, sporadic instances may appear at any time of the year. It is not yet certainly known how the bacillus affects the organism. It is questionable, he thinks, whether the typhotoxin of Brieger has anything to do with its effects. The various diagnostic reactions and pathology are discussed at some length as also the symptoms, which are often indefinite in children. The temperature is one of the most important aids in the diagnosis. In single cases the course of the fever both in duration and severity may be on a par with the worst cases in adults. The pulse corresponds pretty closely to temperature. During height of the fever it is irregular and intermittent. This irregularity is also observed in the convalescent stage, and the duration of the fever is apparently longer in older children. It seems to increase in duration in patients from one to ten years of age, according to Montmollin's studies. Other symptoms such as coated tongue, somnolence, diarrhea, epistaxis, cough, the agglutination

phenomenon, etc., are somewhat similar to those of adults. (The article is to be continued.)

27. **Biliary Colic.**—Cabot first refers to Fenger's suggestion that biliary colic occurs from obstruction in the biliary passages caused by a bending or kinking of the ducts. The author puts on record two cases which appear to have been caused by acute flexure of the gall bladder about its middle. Both were relieved by operation. In such cases from this experience he would prefer cholecystectomy as a cure for the condition. This was performed in the second case. In the first, fastening the fundus of the gall bladder to the abdominal wall effaced the bend in its body and stopped the attacks of hepatic colic, but it left a sensation of dragging, in the hypochrondrium which prevents considering the success perfect.

28. **Chronic Sphenoidal Sinusitis.**—Rogers describes his methods of diagnosing and treating chronic sphenoidal sinusitis. He uses a probe for diagnosis, passing it in a direct continuous line from the inferior nasal spine to the middle part of the middle turbinate, not allowing it to go anterior to this line. If the probe passes in a greater distance than 7.5 cm. it is either in the sphenoid, brain cavity or naso-pharynx. If it goes over the turbinate in the middle part, in the direct line mentioned, one is certainly in the sphenoidal cavity. In opening it he removes the anterior part of the middle turbinate and then fractures and removes the remainder, leaving a free and easy approach to the sphenoidal opening. He does not use adrenalin solution except in the after-treatment. In ten days he proceeds to open the sinus, which is done under cocain, with a forceps devised on the principle of Grünwald's down-cutting forceps, but with shorter jaws. His method has given complete relief in eleven cases, the notes of which are reported. A more extensive operation, such as that of Jansen and Luc by way of the antrum of Highmore, has not been necessary in a single case, since he has devised this method.

Cincinnati Lancet-Clinic.

January 2.

33 *Report of a Case in which a Piece of Hickory-nut Shell was Successfully Removed from the Left Bronchus. John C. Oliver.
34 Some Remarks on the Diagnosis of Renal Tuberculosis. James Y. Welborn. Death Returns. B. F. Lyle.
35 The Successful Treatment of Gonorrhea. A. H. King.
36 Surgery of the Prostate, Pancreas, Diaphragm, Spleen and Thyroid. (Continued.) B. Merrill Ricketts.

33. **Foreign Body in the Bronchus.**—Oliver reports the case noted in the title and refers to several others in his experience. He thinks the following conclusions express the rational indications for and against tracheotomy in this class of cases:

1. Laryngotomy should always be resorted to when a foreign body lodged in the larynx can not be removed through the natural passages.
2. Tracheotomy may be required by reason of edema of the larynx even after the foreign body has been removed.
3. When the foreign body is impacted at or near the bifurcation of the trachea, a tracheotomy is to be viewed in the light of an aid to exploration.
4. The tracheotomy wound may be permitted to close, or even be closed by sutures, in case the foreign body has been removed.
5. Stitching the edges of the trachea to the integument is to be preferred to the tracheotomy tube in cases in which exploration has not been successful in removing the foreign body.
6. Tracheotomy is by no means always necessary in cases of foreign bodies located at or near the bifurcation of the trachea. Spontaneous expulsion will occur in many such cases unless the foreign body is rough or jagged. Attempts to remove such by instrumental aid through an opening in the trachea are urgently indicated.

St. Louis Medical Review.

December 26.

37 *Goat Milk in Infant Feeding. John Zahorsky.

37. **Goat Milk for Infant Feeding.**—Zahorsky has investigated the dietetic value of goat's milk, reviewing the opinions of authorities and experiences with it. He concludes that it resembles cow's milk in its composition, and is suitable for infant feeding. That infants digest it is well attested, while the possibilities of getting it fresh and uncontaminated give it a distinct advantage over cow's milk for infant feeding.

American Journal of Obstetrics, New York.

December.

38 Tuberculosis of the Female Genitalia and Peritoneum. John R. Murphy.
39 A Pseudohermaphrodite, in which the Female Characteristics Predominated; Operation for Removal of the Penis and the Utilization of the Skin Covering It for the Formation of a Vaginal Canal. J. Riddle Goffe.
40 Obstetric Nomenclature: Suggestions for Its Improvement. C. S. Bacon.
41 *Catarrhal Enteritis in Women Simulating Pelvic Disease, with Report of Cases. Robert T. Gillmore.
42 *Ovarian Grafting. Robert T. Morris.
43 Epidemic Cerebrospinal Meningitis in Children. Samuel S. Adams.
44 *Pregnancy and Crime: A Medicolegal Study. Charles G. Cumston.
45 Ovarian Cystomata, with Report of an Unusually Large Multilocular Ovarian Cyst. Charles B. Robins.
46 Pseudo-vaginismus. G. Kollscher.

41. **Catarrhal Enteritis in Women.**—Gillmore describes a class of cases in which the principal symptoms are anemia and neurasthenia with a subjective impression of disorder in the pelvic organs due to constant pain and soreness in the abdomen, bearing-down pain, backache, etc. The real condition in these cases, however, is catarrhal enteritis, which is relieved by proper treatment. He thinks that it is usually due to dietetic errors. Its pathology is rather obscure, as it is rarely fatal. The diagnosis is usually assured by ocular examination of the stools. The treatment consists: 1, in a selected but generous diet, regulation of the bowels by some form of cascara, and if there is a tendency to obstinate constipation or too free movements, using high colon flushing with mildly alkaline water or normal saline, followed by a quart of water containing 8 c.c. of normal fluid extract of hydrastis. He has had good results with a pill consisting of powdered ipecac, creosote, black pepper, naphthol, and hydrastis. Acetozone suggests itself, but as yet he has not employed it to any extent. In conclusion he insists on the importance of examining the stools in obscure cases which come to the gynecologist for relief.

42.—See abstract in THE JOURNAL, Oct. 17, 1903, p. 980.

44. **Pregnancy and Crime.**—Cumston discusses the effects of pregnancy on the mental and moral condition of females. He thinks the judgment and will power may be partially affected, but the sensory or moral disease is limited and only attacks isolated points. He concludes that where guilt is evident pregnancy can hardly be an excuse, but is quite permissible to invoke pregnancy as an attenuating factor in certain cases.

Annals of Surgery, Philadelphia.

December.

47 *Method of Suturing the Prolapsed Kidney. Augustin H. Goelet.
48 *The Gauze-bearing Tape and the Gravity Pad in Pelvic and Abdominal Surgery; Improvements in Technic. John M. Flaherty.
49 Traumatic Epilepsy. John C. McCoy.
50 *On the Results Obtainable by Operative Measures in Affections of the Stomach. John B. Murphy.
51 Intestinal Obstruction Following Operation for Reducible Left Inguinal Hernia Due to a Loop of Small Intestine Caught in Treitz's Fossa. Joseph C. Bloodgood.
52 Perforating Gunshot Wound of the Cervical Portion of the Spinal Cord. Report of Case in which Recovery was Secured, with Ability to Walk. Lewis S. Pilcher and B. Onuf.
53 *Local Anesthesia. F. Gregory Connell.
54 *An Experimental Research into the Temperature Relationship Existing in Shock. Guy C. Kinnaman.
55 Anomalies in the Circle of Willis. With the Report of a Case in which the Communicating Arteries were Absent. Walter C. Howe.

47. **Kidney Suture.**—Goelet's article gives his methods of treatment which have been more or less detailed elsewhere. He says the essential differences between the Brodel suture used by Cullen of Baltimore and published in *American Medicine*, Aug. 2, 1902 (see THE JOURNAL, xxxix, Aug. 16, 1902, p. 396), and his own are: 1. That the apex of the triangle formed by the Brodel suture is above, the ends emerging on the surface of the kidney near together. In the Goelet suture the apex of the triangle is below, the ends of the suture emerging on the surface farther apart from each other and brought out and tied on the external surface. 2. The sutures are placed at a greater distance apart, the lower suture at the lower pole, and they include less area of surface. The Goelet suture does not include the lower pole, which is left normally free, and it includes a larger area of surface. Goelet uses silkworm gut and instead of burying the suture in the muscle he brings it to the surface and ties over a pad of gauze.

48. **Gauze-Bearing Tape and Gravity Pad.**—The gauze-bearing tape as used by Fisher is a piece of white tape about an inch and a half in width and of variable length (three or four feet), armed at one end with a long, blunt-pointed needle or bodkin. On this tape the gauze sponges in a laparotomy may

be strung. It has the advantage of doing away with the numerous separate gauze sponges used in abdominal operations. The gravity pad is a large gauze pad having concealed within its folds and near its center, a plate of lead, two by three inches, weighing about half a pound. Instead of a single piece smaller pieces may be quilted in at different points. The pad is provided with a trailer, though this is not essential as only one, and rarely two are required in a single operation. By these appliances he escapes the danger of losing and leaving sponges in the abdominal cavity. They also assist in the Trendelenburg and other positions in holding back the intestines, as weight properly distributed is more useful than bulk for this purpose.

50. Gastric Surgery.—Murphy discusses the various operative measures in gastric surgery and sees much encouragement in the results. He reviews the experience and technic of different operators and tabulates their results at different times since the operations were first performed. He emphasizes the importance of the prophylaxis of gastric carcinoma by early attention and operation in case of gastric ulcer, etc.

53. Local Anesthesia.—Connell's article is a general review of the subject of local anesthesia by various methods. He points out its advantages as follows: 1. The removal of the danger of death on the table; 2, the avoidance of after-effects of general anesthesia on the heart, liver, kidneys and lungs. Postoperative pneumonia seems to be about as frequent after one kind of anesthesia as the other; the absence of postoperative nausea, vomiting, or unconsciousness or danger of strangulation by fecal vomit. The patient being conscious, he is able to assist the operator. The number of assistants is reduced by one, though it may be convenient to have others at hand to meet the emergencies. There are many cases where local anesthesia is markedly contraindicated, but he holds that it should be used as an adjuvant to, if not a supplanter of, general anesthesia in many cases where the latter is commonly employed.

54. Shock.—According to Kinnaman's experiments and studies shock must not be considered as due to a lowering or exhaustion of one bodily function, but the composite result of interference with the blood pressure and respiration, lowering it in both cases, and a marked fall in the body temperature. As it increases in severity the fall in temperature is the most uniform and progressive symptom. The relationship between the lowered body temperature and shock is evidenced by considering: 1. That in one of the series of cases he reports the fall in temperature was the sole cause of the shock; 2, that where by continuous bath the temperature fell only 1 C., the respirations were increased instead of diminished, and the fall in the blood pressure was lessened. 3. That by raising the body temperature previously lowered in shock, the respiratory rate was increased and the blood pressure raised. The relationship he expresses thus: (*a*) A sufficient fall in body temperature can cause a decrease in the respiratory rate and a marked fall in blood pressure which, together with itself, we designate as shock. (*b*) Conversely, a limiting of the fall limits the fall in pressure and prevents a fall in the respiratory rate, thus limiting or preventing shock. (*c*) Antagonistically, a rise of temperature causes a rise of blood pressure and the respiratory rate (reduced in shock), thus ameliorating all the symptoms. Thus of the three factors temperature takes the first place by its power of production, its power of limitation and power of amelioration of the composite condition—shock.

American Gynecology, Baltimore.

November.

56 *What Is Conservatism in Pelvic Infection? John O. Polak.
57 The Management of Occipito-posterior Positions of the Vertex. James D. Voorhees.
58 A Case of Inversio Uteri Puerperalis Reduced by a Modified Kuestner's Method. Max W. Myer.
59 *Pathology and Treatment of Gonorrhea in Women. A. P. Stoner.

56. Conservation in Pelvic Infection.—Polak believes in early intervention in pelvic infection; there is a time, could we but recognize it, when intervention will prevent further invasion. From his experience with 79 cases, several of which he reports, he thinks that the best chance of saving life and minimizing the sequelæ is obtained by proper surgery, and he has found Pryor's iodin treatment of great value in these cases. Of the 70 patients operated on, 58 have been kept under observation from six months to three years, and 5 reoperated on; 52 have had no further surgical treatment, and 39 of this number are practically recovered, having no pain or gross lesion requiring any attention. None have had subsequent pelvic peritonitis. Six complained of severe dysmenorrhea, but are free from pain between periods. Four in which the lesions were of gonococcal origin, while having no pain, complain of menorrhagia and have large, thickened and more or less fixed uteri, while 3 women have appreciable thickening in one tube. Of the 9 gonorrheal cases refusing operation during the acute attack, all have come under observation in one or more attacks of pelvic peritonitis, and 2 have well-defined pus tubes.

59. Gonorrhea in Women.—Stoner holds that gonorrhea, while a persistent and invading infection, is in the majority of cases overcome by the antitoxic elements of the cells, and may be called a self-limited disease. During the early stages cleanliness and rest are best. The trouble is generally over-treated. If the patient can be placed in bed and given a liquid diet and the infected parts kept thoroughly cleansed by sterile water, the results will be better than those obtained by some of the more active measures often employed. This use of sterile water does not imply the vaginal douche, which he thinks in many cases helps to spread the infection. During the first few days no further treatment is necessary except rendering the urine neutral and less irritating. After the second week a 2 to 4 per cent. solution of protargol or 15 per cent. of argyrol may be instilled into the urethra and also used in the uterine cavity. Curettage of the uterus is not advisable in the acute stages when the tubes and ovaries are infected. In the second stage methylene blue or urotropin may be used, and a plain diet prescribed, consisting largely of milk. The patient should rest absolutely, or at least avoid hard manual labor during the first week or ten days. Should the infection extend to the uterus the tubes are almost sure to be involved. If salpingitis develops, rest in bed becomes imperative. Frequent hot douches, ice bags or turpentine stupes should be utilized to control the pain. Much must be left to Nature but she is frequently unable to cope successfully with the infection until the peritoneum is reached and an exudate thrown out which, for the time being, prevents further inroads. Then the intervention of the surgeon and removal of the diseased organ is called for.

Therapeutic Gazette, Detroit.

December 15.

60 *Regarding Croupous Pneumonia, Especially Its Treatment with Carbonate of Creosote. J. A. Scott and Charles M. Montgomery.
61 *Thirty Years' Experience with Crude Petroleum as a Therapeutic Agent. A. D. Binkerd.
62 *The Question of Priority as to Childbed Fever—Holmes vs. Semmelweis. Simon Baruch.
63 Headache as a Symptom and Its Treatment. Ellice M. Alger.
64 The Oil-massage Treatment of Abdominal Tuberculosis. Duncan Turner.

60. Pneumonia.—Scott and Montgomery have experimented with the use of creasote in the treatment of this disease, and find that it causes no stomach irritation and that the degree of toxemia, in all cases, barring the fatal ones, was mild. That in the cases treated, pseudocrises were common but had no relation to the crisis or mortality. That the mortality percentage (14.9) secured in 67 cases treated with carbonate of creosote does not corroborate the unusually low figures of Wilcox, Van Zandt and others, nor does it prove that the results are due to the treatment by creosote carbonate, as equally good results have been secured in past years by other methods. The study of the clinical effects of carbonate of creosote should be continued, the dosage increased and the effect on the toxemia carefully watched. Brief reports are given of the fatal cases.

61. Crude Petroleum.—Binkerd has used the finest grade of crude petroleum and with the best results in all forms of acute affections of the respiratory tract in his practice at West Monterey, Pa. It relieves the labored and stridulous breathing, cyanosis disappears and expectoration is facilitated, the fever subsides and the patient goes on to convalescence and prompt recovery. He experimented on himself when in bad health from malassimilation, hemorrhoids and rectal prolapse, using crude

petroleum and found that it agreed with the stomach, increased the appetite, caused gastric fermentation to cease and regulated the bowels and kidneys. After two years' daily use of crude petroleum no distaste for the oil has developed; one can take it as readily as milk or water. He does not consider it a food, a tonic nor yet a stimulant, but he thinks it is a complete intestinal antiseptic and disinfectant, and it has demonstrated to his full satisfaction that it has an anti-fermentative action. He twice purposely crammed himself with indigestibles at supper time, following with petroleum, and had no bad effects, except a large evacuation of the bowels and an eager appetite for breakfast. Recently he has been employing it in the treatment of typhoid fever in half-teaspoonful doses every four hours with highly satisfactory results. He thinks it is entirely safe; it is abundant and cheap, and as it is not changed by contact with the intestinal secretions, it is not incompatible with any other remedy that may be advised.

62. Holmes vs. Semmelweis.—Baruch gives documents, quoting Siebold and Dohrn's History of Obstetrics in support of the assertion that Holmes anticipated Semmelweis by five years, in his discovery as to the infective nature of puerperal fever, and that the use of antiseptic chlorid of lime solution in puerperal fever was employed in this country thirteen years before Semmelweis' monograph.

Western Medical Review, Lincoln.

December 15.

65 Melancholia—Diagnosis and Treatment. J. M. Alkin.
66 *Indications for Operation in Acute Pelvic Inflammations. A. P. Condon.
67 Puerperal Eclampsia. W. J. Birkofer.
68 Rickets. F. W. Pieha.
69 Rise of Temperature After Parturition. W. J. Pinkerton.
70 Diphtheria and Its Sequelæ. J. M. Willis.

66. Pelvic Inflammations.—Condon holds that operation is called for when the general state of the patient points to a progressive septic condition with rapid weak pulse, often not agreeing with the temperature, vomiting, tympanitis, a pinched expression and resistance to treatment. Also whenever during the course of an acute pelvic inflammation, whether puerperal or non-puerperal, a fluctuating tumor appears, and when the pelvic inflammation is complicated by a purulent peritonitis.

Chicago Medical Recorder.

December 15.

71 Acute Suppurative Thyreiditis. L. L. McArthur.
72 *Early Massage and Passive Motion in the Treatment of Fractures and Sprains. Daniel N. Eisendrath.
73 The Conservative Energy of the Individual. Henry B. Stehman.
74 Fundamental Considerations in Regard to the Blood. A. C. McClanahan.
75 Acromegaly with Epilepsy. Julius Grinker.
76 Cutaneous Blastomycosis and Lupus Vulgaris Treated with X-rays. E. A. Fischkin.

72. Fractures.—Eisendrath pleads for the use of early massage and passive motion in the treatment of fractures, advising in most cases the employment of a professional under the direction of the physician. The use of hot applications for five or ten minutes prior to the use of massage will render it less uncomfortable to the patient. A number of the active and passive movements of the limb can be carried out immediately after injury, but should only be permitted for a period of five minutes at first, the time gradually increased. The details in the treatment of special fractures of the members are given and the contraindications to the use of early massage in fractures or sprains are stated as: 1, a tendency to displacements; in such cases it is best not to begin either massage or movements until union is firm. 2. In compound fractures until the wound is healed. 3. Where there is danger of infection of the skin, as in case of blebs or extensive abrasions, and 4, the presence of fragments which project, but do not penetrate the skin.

Central State Medical Magazine, Anderson, Ind.

December.

77 *The Complementary Dermatoses of Syphilis. Noah E. Aronstam.
78 Preventive Medicine. W. J. Fairfield.
79 Some Anachronisms in Race Suicide. C. N. Sutner.

77. Complementary Dermatoses of Syphilis.—Under this head Aronstam includes a class of skin affections imposed on the structures altered by syphilis. He holds that they are non-syphilitic, and differ in no way from similar conditions under other circumstances, excepting in being a rather severe type. They are prone to be protracted and obstinate as regards treatment, not influenced by specific medication, which may on the other hand occasionally intensify the lesion.

Medical Bulletin, Philadelphia.

December.

80 Diabetes Insipidus—Melancholia. John V. Shoemaker.
81 *Remarks on Cesarean Section, with the Report of Three New Cases Operated on for Pelvic Deformity. George M. Boyd.
82 The Duty of the Physician in Cases of Questionable Death Causes—Incised Wounds. Milton A. Noble.

81. Cesarean Section.—Boyd reports a number of cases and believes that the same conservatism that has cared for the child should be applied to the mother, and mutilating operations be avoided if possible. Celiohysterotomy has many advantages over celiohysterectomy. He does not agree with those who believe that a woman who has once undergone cesarean section should not be permitted to expose herself to the danger of a second one. Celiohysterotomy has a lower mortality, is more readily performed, and it conserves the mother's interests, while the other operation is mutilating, with a higher mortality, and should only be done when the patient is infected or when some tumor of the uterus makes it necessary, and not simply to prevent future pregnancy. Ligation of the fallopian tubes, which is less mutilating, will accomplish the same purpose.

Occidental Medical Times, San Francisco.

December.

83 *Kidney Tumors of Adrenal Origin. Herbert C. Moffitt.
84 *A Contribution to the Macular Changes in Contusion of the Eye, and Their Forensic Significance. C. S. G. Nagel.
85 *Report of an Abnormal Case of Pregnancy of Unusual Interest. Clinton Cushing.
86 The Scientific Laws Governing the Therapeutic Uses of Silver. A. C. Barnes.

83. Kidney Tumors of Adrenal Origin.—These tumors, according to Moffitt, are common. The early symptoms are pain and hematuria. They may for a long time be relatively benignant, are often soft and extremely vascular. Both primary tumors and disease metastases may pulsate and closely simulate aneurism. They break early into the veins and metastases follow the blood channels. It is important in operating to avoid rough handling, and the renal vein should be tied as the first step. Certain physiologic properties of adrenals are shared by these growths and their metastases and may serve to aid the diagnosis. The peculiar distribution of metastases must be remembered. A latent Grawitz tumor may be overshadowed by a brain metastasis, by multiple bone tumors, lung hemorrhage, pleurisy or metastatic pneumonia.

84. Contusion of the Eye.—Nagel discusses the conditions of macular changes from eye contusion, and reports a case which is part way between the well-marked evanescent type of Berlin's "commotio retinæ" and the permanent macular lesions of Haab with their bad prognosis. He also notices the importance of such cases from a medicolegal standpoint and insists on very painstaking investigation.

85. Abnormal Pregnancy.—In the case reported by Cushing the sac containing the child was above the uterus and imposed on it. The diagnosis was a full-term pregnancy in a rudimentary, closed horn of the double uterus. A careful examination of the parts before and after removal of the sac demonstrated no connection between the cavity of the sac and the maternal passages, except through the open end of the fallopian tube on the left side. The explanation given is that the spermatozoa passed into the peritoneal cavity through the right fallopian tube and migrated into the left, impregnating the ovum en route. Only the right fallopian tube was connected with the cavity of the uterus connected with the external passages.

Wisconsin Medical Journal, Milwaukee.

December.

87 *Some of the More Modern Views Concerning Typhoid Fever. James E. Herrick.
88 Semilunar Cartilages; Their Anatomy and Surgery. H. A. Sifton.
89 Dissecting Aneurism of the Aorta, with a Report of a Case. John L. Yates.
90 Significance of Perforating Wounds of the Eyeball. James A. Bach.

91 Prostatectomy. T. W. Nesum.
92 Management of the Mother During Childbed Period. A. D. Gibson.

87. **Typhoid.**—Certain facts concerning typhoid fever that are of comparatively recent acquisition are noted by Herrick, who draws practical deductions from them. 1. That typhoid is not a local intestinal disease, though the majority of the germs is probably in the intestinal tract. The intestinal lesions, however, are only a part of the general systemic process. The disorder is a bacteriemia. The lesson to be drawn from this fact is that the old precautions against the spread of typhoid from water ought not be neglected, as this is probably the most frequent way it is acquired, and any changed notion as to the pathogenesis which results in relaxation of prophylaxis is dangerous. Still, it indicates that we should not depend too much on intestinal antisepsis for the general condition. The time to treat typhoid by intestinal remedies is before the ordinary symptoms appear, but this is impossible because we can not recognize the disease at this stage. 2. Typhoid fever may occur without intestinal lesions, which would be impossible according to older views, and this should teach us to use great care in postmortem decisions and to employ bacteriologic examination before excluding typhoid. 3. Certain cases closely resembling typhoid are now known to be due to closely related micro-organisms, called paratyphoid germs, and they seem to run a shorter and milder course than the genuine disease. Possibly some of the so-called abortive typhoids are of this class. 4. Many of the complications of typhoid fever are better understood. Some may be due to secondary or mixed infection, but some others are clearly metastatic, localizations of organisms brought by the blood; small numbers of germs or unfavorable local conditions may induce no appreciable symptomatic change, while larger numbers and more favorable conditions may make a focus of inflammation or suppuration, as the typhoid bacillus is certainly a pyogenic organism. This explains the periosteal inflammation, often met with, also parotitis, thyroiditis, mastitis, meningitis, encephalitis, otitis, orchitis and prostatitis that may be due to the typhoid bacillus, as well as abscess of the liver, kidney and spleen and out-of-the-way inflammations, such as of Bartholin's glands, the tear duct and ovarian cyst. The lung, pleura, and pericardium may be involved and there may be a mixed infection with other germs. 5. There are two common complications that should be mentioned. They are typhoid infection of the gall bladder and the urinary bladder. The first is almost universal, but in most cases produces no symptoms. In other cases true cholecystitis occurs and pus may form which demands surgical interference. A knowledge of recent typhoid, therefore, may be of value in cases where symptoms of gallstones appear. Typhoid bacilluria is present in about one-fourth of all the cases, and usually symptomless, but the danger of infection in these cases renders them of great importance. Therapy is here efficient. Urotropin promptly rids the urine of typhoid bacilli, and it is not a bad plan to give it for a couple of days, as it is in typhoid convalescence that typhoid bacilluria usually appears. The blood examinations are of great help in diagnosis and the Gruber-Pfeiffer agglutination reaction, commonly called the Widal Test, hardly requires mention, but failure to obtain it does not exclude typhoid, and this is the commonest error. There is another aid to diagnosis which Herrick thinks is promising, and that is the examination of the blood for typhoid germs, the making of cultural experiments, and the surprising results that follow this method. He thinks this is the surest way of making an early and positive diagnosis. 7. The importance of prophylaxis as regards drinking water is not yet realized by the public, but this is not the only method of infection; food contaminated by flies, milk, oysters, etc., are possible carriers of the germs and the physician must carefully watch the proper disposal of excreta from these cases, including the sputum as occasionally it contains typhoid germs from typhoid bronchitis, laryngitis, etc. 8. A specific for typhoid is yet wanting. There are fewer attempts now at laying down courses of treatment, whereas a proper diet, hydrotherapy, care as to the bowels, symptomatic remedies employed when necessary, watching for complications, is a rational method. Some day a specific will be given us. We shall then be able to do for typhoid what we now do for diphtheria and malaria. In the meantime we must not overdo skepticism by becoming nihilists, but give whatever is necessary and what is harmless.

Virginia Medical Semi-Monthly, Richmond.

December 25.

93 Rupture of the Bladder. Joseph B. Bissell.
94 Prevention of the Spread of Ringworm. F. H. Beadles.
95 Home Treatment of Consumption. H. H. Levy.
96 Remarks on Appendicitis. Jacob Michaux.
97 Escape of Amniotic Fluid with Continued Viability of Fetus. J. H. Winfrey.

Oklahoma Medical News-Journal, Guthrie.

December.

98 Postpartum Hemorrhage. G. A. Wall.
99 Roentgen Rays in Tuberculosis. M. F. Coomes.

New England, Medical Monthly, Danbury, Conn.

December.

100 Placenta Previa, with Report of Three Cases. H. R. Coston.
101 Tuberculosis and Yellow Fever. C. B. Newton.
102 Clinical Remarks on Some Improvements in the Method of Local Analgesia. Arthur E. J. Barker.
103 Clinical Notes on Dysemia. Louis J. Gravel.

Indiana Medical Journal, Indianapolis.

December.

104 Histo-anatomical Alterations in Chronic Bright's Disease. R. H. Ritter.
105 Treatment of Chronic Bright's Disease. Simon P. Scherer.
106 The Surgery of Chronic Nephritis. Wm. N. Wishard.
107 Eye Symptoms in Bright's Disease. F. C. Heath.
108 Repair of the Pelvic Floor. O. G. Pfaff.

Pacific Medical Journal, San Francisco.

December.

109 Opium in Epistaxis. W. F. Southard.
110 Teaching of Physical Diagnosis. Wilder Dwight.

Journal of the Association of Military Surgeons, Carlisle, Pa.

January.

111 Sanitary Service in Surigao, a Pilipino Town in the Islands of Mindanao. Henry de Rost Phelan.
112 Report on Cases of Malignant Disease Observed at the United States Army General Hospital at the Presidio of San Francisco, 1899-1902. Alfred C. Girard.
113 Spinal Anesthesia in Military Surgery. Augustin Aguirre.
114 Epidemic Catarrh on Shipboard. Dudley N. Carpenter.

Dominion Medical Monthly, Toronto.

December.

115 *The Surgery of To-day. Alex. Hugh Ferguson.
116 Report of Two Cases of Hour-glass Contraction of Stomach, with Remarks. H. Howitt.
117 The Surgeon as an Anatomist. Jos. E. Gibbs.

115.—See abstract in THE JOURNAL, xli, title 7, p. 929.

Washington Medical Annals.

November.

118 The Range of Radio-therapy in the Treatment of New Growths. T. N. McLaughlin.
119 Case of Uterine Fibroids, One of which Protruded Into and was Adherent to the Vaginal Wall; Death from Uterine Hemorrhage. Mary Parsons.
120 A Brief Note on the X-ray Treatment of Glandular Tuberculosis. F. P. Vale.
121 Ectopic Pregnancy—Analysis of Thirty-two Cases. D. S. Lamb.

Iowa Medical Journal, Des Moines.

December 15.

122 Brotherly Love. Frank S. Hough.
123 The Clinical Results and Failures with the Roentgen Rays in Therapy. J. Rudis-Jicinsky.

Medical Review of Reviews, New York.

December 25.

124 Cancer and Its Origin. Henry Morris.
125 President's Address, Medical Society of the County of New York. Wendell C. Phillips.

Transactions of the Chicago Pathological Society.

November 9.

126 Report of a Case of Primary Tumor of the Pleura. Peter Bassoe.
127 Osmotic Disturbances as the Cause of Glaucoma. Experimental Production and Clearing of Cataractous Lenses. Brown Pusey.
128 The Occurrence of Virulent Pseudo diphtheria Bacilli in Gangrenous Tonsillitis and Pharyngitis of Scarlet Fever. H. H. Reedijer.

Medical and Surgical Monitor, Indianapolis.

December 15.

129 Ohio Valley Medicine and Surgery. Joseph R. Eastman.
130 Medical Reciprocity. W. A. Spurgeon.
131 Surgery of the Thyroid: Historical and Experimental. B. Merrill Ricketts.

Merck's Archives, New York.

December.

132 Jaborandi and Its Alkaloid Pilocarpin. J. M. French.
133 Sodium Chlorid as a Remedial Agent. J. Dabney Palmer.
134 Veratum Viride. W. H. Blake.

Denver Medical Times.

December.

135 The Perfected Treatment of Fibroid Tumors of the Uterus. Lewis S. McMurtry.
136 Elements in the Recovery of the Incipient and Acute Insane. J. E. Courtney.
137 Syphilitic Lesions of the Eye. Edward Jackson.
138 The Surgical Anatomy Involved in Resection of the Cervical Sympathetic. H. D. Niles.

Old Dominion Journal, Richmond.

December.

139 Physical Findings of Pulmonary Tuberculosis. Robert F. Williams.
140 Home Treatment of Consumption. H. H. Levy.
141 Pneumonia. Joel Crawford.
142 Excision of the Gasserian Ganglion. J. Shelton Horsley.
143 Taking Cold. W. K. McCoy.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

December 26.

1 *Observations on Diabetic Coma; with Special Reference to Beta-oxybutyric Acid as an Etiologic Factor. Carstairs Douglas.
2 *Some Observations on the Temperature of Coma. James E. H. Sawyer.
3 *The Stage of Invasion in Measles. R. W. Marsden.
4 *Some Remarks on a Case of Chloroma. Peverell S. Hichens.
5 *On the Relation of the Argyll-Robertson Phenomenon to Syphilis. J. Michell Clarke.
6 *On Sudden Heart Failure in Toxemic Conditions, with a Special Reference to Diphtheria and Beri-beri. Arthur Stanley.
7 A Case of Complete Ophthalmoplegia Occurring During Whooping-cough. B. W. Gowring.
8 *Acute Rheumatism: Five Cases of Apparently Direct Infection. E. Sydney Hawthorne.

1. Diabetic Coma.—Douglas discusses the causes of diabetic coma, more especially the typical form beginning with digestive disturbance, vomiting, abdominal pain, muscle weakness and drowsiness passing into coma, and showing the symptom of "air hunger" described by Kussmaul. Death may occur in twenty-four hours. Other forms such as that after fatigue, and that with ataxia and confused speech, are less important. He considers it an acid intoxication. The acid probably acts by diminishing the alkalescence of the blood and preventing the normal elimination of carbonic acid by the lungs. The patient may be actually cyanosed. It is this interference with the internal respiration that gives rise to the dyspnea noticed in the disorder. Other causes have been suggested, but he does not credit them as being generally effective. The only rational line of treatment is the introduction into the system of an alkali, using either large doses of sodium bicarbonate by the mouth or, better still, administering it hypodermically or intravenously. Cases have been reported where benefit occurred from this treatment, and it should be tried in all grave cases. Other treatments such as the gluconic acid treatment of Schwarz of Prague, which has been reported successful, and the use of phenol, suggested by Lepine, are also mentioned. This latter has not, however, been very successful.

2. The Temperature in Coma.—A study of the temperature in different conditions of coma is taken up by Sawyer, who finds that the observation of the body temperature in the comatose state is of considerable value in the prognosis, though of comparatively little use in helping to diagnose the cause of the condition, excepting under special conditions. In some cases, however, where the cause is not evident, an examination of the temperature chart will sometimes clearly indicate its nature, as, for example, it may aid in differentiating between uremic coma and that due to cerebral hemorrhage. In the former there is apt to be a rise of temperature; in the latter usually an earlier fall and later reaction. If the temperature is above normal soon after the onset of coma, even only two or three degrees Fahrenheit, then the prognosis is nearly always unfavorable. A very low temperature of 95 or 96 at this period usually indicates a fatal termination, as it is generally dependent on a large cerebral hemorrhage or some other serious injury to the brain.

3. Measles.—Marsden reports cases where the prodromal symptoms were irregular, quoting also von Jurgensen, who says they may be practically absent. In two cases exanthem appeared the sixth day from the onset of the pyrexia, while in one case the first indication of the illness occurred the ninth day preceding the eruption. It is evident that the stage of invasion of measles may be of variable duration, and the question is whether this variability is independent of or at the expense of the stage of incubation. Theoretically, one would look for absence of the prodromal stage in mild cases and the prolonged prodromal stage in severe ones. In both these cases with slight prodromata the attack was severe.

4. Chloroma.—After reporting a case with microscopic examination and briefly redescribing a case reported by Dunlop, Hichens discusses the symptoms and the nature of the disease. He rather favors the opinion of Byrom Bramwell that it may be a sort of lymphatic leukemia, a manifestation of the same disorder, but characterized by solid deposits.

5. Argyll-Robertson Pupil.—From a study of the phenomenon Clarke suggests that previous syphilitic affections do not seem to be sufficient without some further change to lead to the presence of the Argyll-Robertson phenomenon. In 37 cases, not selected, of syphilis, 28 of which were cerebral, the pupils reacted well to light and accommodation in 25. In 4 the reaction to light was feeble or sluggish, but with normal accommodation. In 2 there was a unilateral reflex pupillary rigidity, but 1 of these had an old optic atrophy which had to be considered and in not one of the whole number was the Argyll-Robertson phenomenon present in complete form. In his last 40 cases of tabes dorsalis he found this reflex pupillary rigidity in 77 per cent., and in 88 per cent. of the cases only was there a history of syphilis. It also occurred in 6 patients in both eyes and one unilaterally who positively denied syphilis, such denial, however, does not exclude it. He thinks, therefore, that it is an evidence of further degenerative process at work within the nervous system. It does not necessarily occur with the ordinary visceral lesions of the disease. This degenerative process is to be regarded in most cases as a parasyphilitic one, though in a certain proportion proof may be wanting and there is possibly some other unknown cause. It may remain stationary at the early stage without further development for a long period. If the observations are correct the Argyll-Robertson phenomenon is even a more important sign of disease than has been previously considered.

6. Heart Failure in Toxemic Conditions.—Stanley has analyzed several hundred cases each of diphtheria and beri-beri in reference to the heart symptoms and concludes:

1. Beri-beri and diphtheria have a marked degenerative action on the heart muscle, which frequently causes fatal circulatory failure. 2. In this respect beri-beri and diphtheria resemble other toxemias, such as influenza and alcohol and arsenic poisoning, which often cause peripheral neuritis, and also other toxemic diseases, such as typhoid fever, plague and acute rheumatism, which do not or rarely give rise to peripheral neuritis. 3. Beri-beri and diphtheria are the diseases par excellence in which sudden fatal heart failure occurs. 4. The heart muscle degeneration is not a secondary result of neuritis of the vagus. 5. The heart-muscle degeneration takes place, as a rule, before skeletal-muscle degeneration, and is the result probably of direct action of the toxin and not a secondary result of nerve change. 6. Sudden heart failure does not indicate a sudden lesion, but rather is the result of a gradually increasing heart weakness from cardiac muscle degeneration, which may be precipitated by any sudden exertion, but more frequently is the result of the principle of "all or nothing," the transition from "all" to "nothing" being necessarily rapid. 7. The cardiac physical signs in beri-beri closely resemble those found in diphtheria and are of paramount importance in prognosis and treatment.

8. Rheumatism.—Hawthorne reports five cases of rheumatism occurring in or near one house in the same family in which the ordinary causes of the disease could not be found and under the circumstances it seemed to indicate direct personal infection.

Australasian Medical Gazette, Sydney.

November 20.

9 The Clinical Signs and Pathological Changes in a Case of Addison's Disease. R. Scot Skirving.
10 *The Mechanism of Trigeminal Neuralgia. C. S. Hawkes.
11 Case of Chronic Nephritis with Ascites and Repeated Paracentesis. Archibald A. Hamilton.
12 Notes on Case of Lymphadenoma or Lympho-sarcoma Presenting Some Unusual Features. J. M. Mason.
13 Pneumothorax Due to Pulmonary Hydatid. W. T. Hayward.

14 Pneumothorax. Arthur H. Gault.
15 Gonorrhœa in the Female. C. MacLaurin.
16 Some Cases of Hysterectomy. James T. Mitchell.
17 Notes on Some Cases of Puerperal Septicæmia. E. H. Binney.
18 Gangrene of the Kidney. R. E. Welgall.
19 A Case of Widespread Interstitial Myositis in a Child. W. F. Litchfield.

10. Facial Neuralgia.—Hawkes reviews the theories of facial neuralgia and its treatment and is inclined to support Hare's view that it is due to a vasomotor storm or neurosis. The naturally indicated treatment would be the removal of the superior cervical ganglion and only on failure of this to relieve the symptoms should division of the sensory root of the gasserian ganglion, or cutting its main branches with interposition of rubber tissue after Abbe's method, be undertaken. Removal of the ganglion itself, he thinks, is unnecessary. He bases his theory on the effects of removal of the cervical symphatic, the effects of pressure on the carotid in relieving acute pain, etc., and other similar symptoms.

Journal of Tropical Medicine, London.
December 15.

20 Climatic Bubo in Uganda. Aldo Castellani and George C. Low.
21 The Preparation of Permanent Stained Specimens of Ameba Coli. Thomas Hart.
22 Municipal Sewerage. (Continued.) Fred Smith.
23 Tropical Hygiene. (Continued.) W. J. Simpson.

Indian Medical Gazette, Calcutta.
November.

24 Notes on Operations for Abscess of the Liver, Ascites and Gallstones. W. J. Niblock.
25 Primary Carcinoma of the Liver. E. F. Gordon Tucker.
26 An Epidemic of Catarrhal Jaundice in Buxar Central Jail. S. Anderson.
27 Jaundice at Port Blair, Andaman Islands. A. K. Chowdry.
28 Liver Chill as a Factor of Disease in the Tropics. (To be continued.) A. E. Grant.
29 An Attack of Gallstones—Collapse; Death. J. T. Calvert.
30 The Life-span of the Guinea-worm. Arthur Powell.
31 Abscess of Ovary Presenting All the Signs of Ovarian Cyst. C. M. Thomson.
32 Four Cases of Menorrhagia Successfully Treated with Suprarenal Gland Extract. C. C. Murison.
33 *A Case of Transposition of Viscera Recognised During Life; Death from Malarial Fever; Postmortem—Total Congenital Absence of Spleen. R. D. Saigol.
34 Malaria: As Seen in the Andamans Penal Settlement. (To be continued.) Ernest E. Waters.

33. Visceral Transposition with Absence of Spleen.—Saigol's case was that of a private soldier aged 24, who was apparently suffering from slight catarrhal jaundice. Transposition was diagnosed during life, but thought to be only partial. The patient came the second time to the hospital suffering from malarial fever and succumbed from a malignant type of the disease. The autopsy showed the viscera completely transposed, the liver very large and almost black in color, completely transposed, with total absence of the spleen. There had never been an abdominal operation performed as far as learned, and there were no evidences of any. The question whether absence of the spleen could be responsible for the severity of the symptoms causing death is raised and it is suggested that the very dark color, not congestion, of the liver and enlargement of the glands along the lesser curvature of the stomach and mesentery as well as the large size of the suprarenals had perhaps something to do with absence of the spleen and were probably compensatory. Some peculiar extracorpuscular elements were found in the blood before death, which are described as racquet-shaped, and Saigol thinks these have never been noticed before. Whether they were a new form of parasites or only the result of the quinin given he is unable to say. He has never before seen a case die with evidence of heart failure from malaria, as did this one, and suggests "syncopal form of malarial fever" as the best name for this special type of disease. No malignant forms of malarial parasites were recognized.

Bulletin de l'Académie de Médecine, Paris.

35 (LXVII, No. 39.) *La médication surrénale dans la maladie d'Addison. Boinet.
36 *Essai de traitement de la tuberculose pulmonaire avec le sérum de Marmorek. Dieulafoy, Monod, Le Dentu and Hallopeau.
37 *Cas de faux asthme d'origine gastrique. G. Hayem.
38 (No. 40.) Sanitary Measures Against the Plague. Committee Report.—Sur le lazaret de Frioul et les mesures de defense contre la peste.
39 Evolution anatomique des fractures mobilisées dans le but de provoquer des pseudarthroses. V. Cornil and P. Coudray. Experimental.

35. Suprarenal Medication in Addison's Disease.—Boinet deduces the following conclusions from his experience in 8 cases of Addison's disease treated with adrenalin, and experimental research by himself and others. He warns that this treatment is contraindicated in severe and advanced cases of Addison's disease, as there is danger from the subcutaneous injections when only a small part of the parenchyma of the suprarenals is still intact and able to fulfill its physiologic task. Even in recent and early stages of the disease the dose should never be more than 1/3 mgm. In these early cases we may anticipate, he says, that in these small doses the adrenalin will stimulate the still sound portions of the gland to compensating hypertrophy. It is better to fraction even this dose, and the medication should be suspended if tremor or other indications of intolerance supervene. The longer it is continued the smaller the doses should be and the longer the intervals. He found an aqueous-glycerin extract the best preparation for the purpose, made according to the Brown-Séquard method, not surpassing the dose of 1 c.c., supplemented, possibly, by ingestion of some other preparation of the glands in the intervals between the subcutaneous injections. He thinks that it may be preferable to substitute oxyadrenalin, which is only one-tenth as toxic as adrenalin itself. He suggests the possibility of anti-Addisonian serum treatment for advanced cases. Six of his 8 patients were very much improved after an average of 220 subcutaneous injections of the glycerin extract of suprarenal capsules; but 2 others in more advanced stages died in two to four days after this treatment had been instituted. The cases are reported in detail.

36. Experiences with Marmorek's Serum.—Dieulafoy, Le Dentu and Hallopeau report unfavorable experiences with this new serum, but Monod stated that his patients improved under it.

37. False Asthma of Gastric Origin.—Hayem has had occasion to observe a few cases of distressing asthma or heart trouble which were due solely to mechanical pressure from an over-distended stomach. An ignored or misinterpreted glandular gastritis had entailed dilatation of the organ and thus produced the attacks of suffocation and constant dyspnea. During these attacks the diaphragm as it contracted induced a splashing sound synchronous with the respiratory movements, and this sound alone is enough to differentiate these attacks of "false" gastric asthma or heart disease. He describes a case in detail, the patient about 60 years old, robust, with a tendency to corpulence. For eight years he had noticed symptoms of dyspepsia, oppression in the stomach, distension of abdomen and eructations, especially after the last meal of the day. These symptoms persisted for five or six years, combated only by a little sodium bicarbonate at night. Transient attacks of gastralgia then followed, which the patient ascribed to smoking and gave up tobacco, but the dyspepsia and gastralgic attacks still persisted, and two years before applying to Hayem he commenced to suffer from another symptom—suffocation. Attacks of violent dyspnea occurred, accompanied by cold sweats, and the tendency to dyspnea became continuous. During the last eight months the patient was in a state of constant suffocation. He had to sleep sitting up, and the slightest effort brought on a spasm of dyspnea, respiration 60, face cyanotic, with inability to speak, the pulse small, frequent but regular, the extremities blue and cold. The remarkable feature of the case was the treatments to which he had been subjected. The first physician consulted diagnosed asthma, and did not prescribe. The second diagnosed heart disease and, finding a little sugar in the urine, inaugurated a strict diabetic diet, but the suffocation persisted. The third physician instituted treatment in turn with trinitrin, valerianate of ammonia, various solutions of iodids, potassium bromid, strontium lactate and bromid, sodium bicarbonate, supplemented in the intervals by spartein sulphate, guaiacol carbonate, cascara, belladonna and still other drugs. Notwithstanding this incessant and violent medication, the dyspnea persisted intensified. The dilated stomach reached three finger breadths below the umbilicus and the splashing

sound was marked, the suffocation and cyanosis almost continuous. Hayem applied lavage of the stomach, restricted the diet to a quart of milk a day, supplemented by two nutrient enemas, and in twelve hours all suffocation had ceased, and all dyspnea by the end of twenty-four hours. For the first time in months the patient was able to sleep in a bed. The stomach content indicated the presence of a parenchymatous gastritis with hyperchlorhydria, no stenosis, and speedy and complete cure followed appropriate treatment of this condition.

Presse Médicale, Paris.

40 (II, No. 98.) *Le radio-diagnostic de l'acromégalie. A. Béclère.
41 A propos d'actinomycose. H. Neukirch.
42 (No. 99.) *Du diabète "aglycosique." Debove.
43 *Radiographic Tests of the "Digestive Traverse." J. A. Sicard and C. Infroit.—L'épreuve de la traversée digestive.
44 *100 tentatives d' inoculation pelodique. L. Jacquet.
45 The Physician as a Pioneer in New Countries. J. Régnault.—Les débouchés de la médecine. Le médecin gent d'influence et de pénétration dans les colonies, etc.

40. Radiography in Diagnosis of Acromegaly.—Béclère gives radiograms of skulls showing that radioscopy is able to reveal latent acromegaly by the abnormal configuration of the walls of the skull, the exaggerated development of the frontal sinuses, resembling those of an elephant, and by the enlargement of the sella turcica.

42. Diabetes Without Sugar in the Blood.—Debove knows of only one other case on record which resembled the one he describes. His patient was a girl of 18, and the other subject was a man of 25. In both an excessive elimination of sugar was accompanied by normal proportions of sugar in the blood. He assumes that the sugar eliminated was formed entirely in the kidney, while at the same time the kidneys were sound. He thinks that examination of the blood as a routine measure would show that such cases are not as rare as supposed. His patient is still under treatment as for ordinary diabetes.

43. Radiographic Tests of the Digestive Passage.—Sicard prepared some bismuth capsules by dipping each in turn into collodion. This rendered them insoluble in the digestive tract, and the tests were made with healthy young men, who each swallowed two of the capsules. Their passage through the digestive tract was traced and followed with more than a hundred radiograms taken at different intervals. Nine of the most striking are reproduced. The two capsules traveled along generally close together. During the first twenty minutes they were clearly seen in the greater curvature, but after the first half hour to the seventh or eighth hour no further trace of them could be seen. About the eighth hour the capsules reappeared, and in the cecum, just in front of the right ilium. They remained close together in the cecal region from the eighth to the fourteenth hour with little onward movement. From the fourteenth to the sixteenth hour they traveled along the ascending colon. During the three following hours they passed along the transverse colon and tarried a long time at the left angle of the colon. From the nineteenth to the twenty-second or twenty-fourth hour they slowly passed downward in the descending colon and stopped at the sigmoid flexure, where they remained quietly until their final expulsion. In some subjects the entire passage of the capsules was complete in sixteen hours; in others not until after thirty hours. The arrival of the capsules in the cecum is the best means for comparison of the "digestive traverse," and may be accepted as a standard. If the capsule lingers for more than thirty minutes in the stomach, the motor functions of the organ are evidently imperfect. The motor function of the small intestine can also be estimated from the length of time that elapses before the capsules make their appearance in the cecum. The seven or eight yards of the small intestine are normally traversed at the rate of about a yard an hour, and this progress is too rapid to allow the capsules to be detected by ordinary *x*-rays.

44. Attempts at Inoculation of Alopecia Areata.—Jacquet describes a hundred attempts made on himself and five of his students to inoculate themselves with the above affection under the most favorable conditions for its successful transmission. Not one of the attempts resulted in the loss of a single hair.

Revue de Chirurgie, Paris.

Last indexed XLI, page 288.

46 (XXIII, No. 11.) Report of French Congress of Surgery. Addresses on "Excision of Intestine," "Brain Tumors," etc.
47 *Le diagnostic des tumeurs orbitaires. F. Terrier and V. Morax.
48 (No. 12.) *Nanisme ancestral par achondroplasie ethnique. A. Poncet and R. Leriche.
49 *De l'esophago-gastrotomie transdiaphragmatique. Operation de Biondi. A. Gosset.
50 La luxation congénitale de la hanche. Réfutation des théories pathogéniques. Discussion des traitements actuels. Etude critique et expérimentale (hip joint). F. Le Damany (Rennes).
51 Kyste chyleux du mésocolon ascendant. Mériel (Toulouse).
52 *Diagnostic du siège de l'occlusion dans l'iléus. E. Tavel (Berne). (Commenced in No. 9.)
53 *Firearm Wounds of Stomach. E. Forgue and E. Jeanbrau.—Des plaies de l'estomac par armes à feu. (Commenced in No. 9.)
54 *Kystes paranéphriques et urinéphroses traumatiques. P. Delbet. (Commenced in No. 7.)

47. Diagnosis of Tumors of Orbit.—Terrier and Morax report with several cuts 2 cases of tumor in the orbit and discuss the operative indications. A table of 16 cases is appended with the particulars of the growth and intervention. All were fibromata or sarcomata or a combination of both, with one exception, which proved to be an endothelioma, and all are of European origin except Lange's case, 1897.

48. Ancestral Dwarf Growth.—The principal points in this article were reviewed in THE JOURNAL of November 21, 1903, page 1305.

49. Esophago-Gastrostomy Through the Diaphragm.—Gosset has worked out on the cadaver and successfully performed on a dog the operation which he calls transdiaphragmatic esophagogastrostomy. He thinks it has a promising future for lateral anastomosis between the esophagus and stomach in case of stenosis of the esophagus or cardia from a neoplasm or cicatricial tissue. It is possible by this mode of intervention to implant the upper end of the esophagus on the greater curvature and thus exclude the cardia, and also to remove the entire stomach by the abdominothoracic route, completing the intervention by a Y anastomosis between the esophagus and the intestine. The various steps of the operation are shown in 10 large cuts. The flap raised is shaped like a U, the upper points reaching to the level of the left axilla, each side of it. The parietal pleura is then incised and the esophagus drawn out. The diaphragm is then incised and the stomach seized and drawn out into a long cone. One side of the cone is then sutured to the esophagus and the diaphragm sutured around the base of the cone after anastomosis has been established. Forty-eight days after this operation on a dog the animal is in apparently perfect health, and has gained 600 gm. in weight. The operation can be completed on the cadaver in thirty-five to forty-five minutes. The successful outcome in the number of transpleural and transdiaphragmatic operations that have been done since 1895 encourages Gosset in the hope that this new operation will be found useful in its proper field.

52. Diagnosis of Site of Occlusion in Ileus.—Tavel quotes Murphy's classification of ileus with approval, but does not think it is comprehensive enough. He regards ileus as dynamic or mechanical, but classifies the dynamic form as due to aperistalsis, dyperistalsis, hyperperistalsis or antiperistalsis. The mechanical form is due to obstruction, compression, faulty position, stricture or atresia. Compression may be from a foreign body, displacement or inflammation of organs, exudates, neoplasms or adhesions. He enumerates 80 subdivisions of these various groups. The article is based on 24 cases, which are described in detail, with 18 cuts. He formulates as follows the symptoms of occlusion at different points in the intestinal canal. At the pylorus, the symptoms are mucous vomiting, with food, sometimes mixed with blood; stools rare; gases seldom passed; pains in the region of epigastrium and in back; stomach dilated and resistance in the region of the pylorus. The symptoms are the same, plus icterus, for what he calls duodeno-ampullar occlusion. Duodenal occlusion is accompanied by vomiting of food with or without bile and pancreatic juice; quantities of bile and pancreatic juice in stomach; vomiting copious; the patient vomits much more than he ingests; stools and gases are rare or entirely absent;

regional meteorism of the epigastric region and retraction of the subumbilical region except in case of enormous dilatation of stomach. No stools or gas pass in case of occlusion below this point. When in the jejunum or ileum, the vomiting is mucous, mixed with bile and later fecaloid, with regional meteorism of the middle part of the abdomen, more or less pronounced as the site of the occlusion is lower. Ileocecal occlusion is marked by regional meteorism without the "colic frame," and without displacement of the liver and thoracic organs, but with tenderness in the ileocecal region and possibly also in the right wall of the small pelvis when palpated through the rectum or vagina. In occlusion of the right angle of the colon, there is pronounced meteorism with more or less pushing up of the diaphragm, dilatation of ascending colon and pronounced tenderness in liver region. Rectal injections are well tolerated and the vomiting is tardy or may not occur at all. The same symptoms accompany occlusion at the left angle of the colon, only that the transverse colon is also dilated and there is tenderness in the left hypochondrium, while large rectal injections are not tolerated. In case of sigmoid, iliac or pelvic occlusion, vomiting is tardy or absent, meteorism is very pronounced, with the "colic frame," the liver and heart pushed back sometimes until all dullness over them disappears. Small injections are more or less tolerated, according to the site of the obstacle. It can be determined by palpation in case of sigmoid or iliac occlusion, but when located in the pelvis, the obstacle is not felt as a painful point on external palpation, but can be detected through the rectum or vagina.

53. **Firearm Wounds of Stomach.**—Forgue devotes fifty-one pages to the tabulated records of 162 cases of firearm wounds of the stomach, including a number published in America. The list includes a group of 26 carefully observed, in which the lack of functional symptoms justified expectant treatment, and all recovered except 2. In a large number of the fatal cases the records state that a lesion in the liver or other organ had been overlooked at the laparotomy. The composite picture from the results is a plea for immediate operation except in military surgery. The earlier the intervention the less serious it will prove and the greater chances for warding off impending danger. He summarizes: "In case of doubt, do not refrain," the reverse of the old motto. If the patient is not seen until a day or two after the injury, and if the general condition and facies are good, the abdomen supple and painless, with no tympany, and the patient has not passed or vomited blood and has no fever, expectant treatment should be the rule, with absolute repose, dieting and morphin every two or three hours. Even in such a case as this, if the surroundings favor operating, the surgeon should be ready at the slightest symptom (vomiting, tympany or dissociation of the pulse and temperature), draining whether there are perforations or not. Operation is further indicated when the stomach contents escape through the wound, if seen early. If several days have elapsed, there is no hurry. The patient has escaped peritonitis, thanks to his fistula, and the latter can be closed at any time.

54. **Pararenal Cysts and Traumatic Uronephrosis.**—Delbet reviews in this extensive article 66 cases personally observed or collected from the literature, with the symptomatology, treatment, etc. Incision, he concludes, is preferable to puncture. The latter has a record of only 8 cures against 21 recurrences and 3 deaths, while by incision 18 have been cured, including 9 totally and 9 with a fistula, without a single death. The intervention should be extended to examine the condition of the kidney and ureter, with a plastic operation on the latter if necessary, and secondary nephrectomy if this fails. Statistics show that nephrectomy is a singularly benign operation under the circumstances, with no mortality in these cases.

Semaine Médicale, Paris.

55 (XXIII, No. 50.) *Utilité et limites de l'action chirurgicale dans le cancer. F. Lejars.
56 Les Congrès de Médecine aux Etats-Unis (in U. S.). F. Munch.

56. **Utility and Limitations of Surgery in Cancer.**—Lejars recapitulates the principal points learned in regard to operative treatment of cancer in late years, emphasizing anew the need of earlier diagnosis, of extensive, regional ablation, and of intervention in the inoperable cases. He quotes a recent communication from Lomer to the effect that persistent, repeated application of the searing iron may induce complete retrogression of the neoplasm. He thinks Lomer is too optimistic, but believes that two or three such interventions are liable to transform an inoperable into an operable tumor. He much prefers direct action on the tumor to indirect procedures, such as ligating the arteries, etc. The latter may have a temporary palliative influence, but the progress of the neoplasm is not checked.

He reviews the recent literature on the subject of tardy recurrences of cancer. The total number free from recurrence after a number of years proves to be very small on the whole, but the survivals for a few years or parts of years are a very precious gain, and this seems to be the only outlook for surgery in the overwhelming majority of cases at present.

Archiv f. Gynäkologie, Berlin.

Last indexed XLI, page 288.

57 (LXX, No. 2.) Origin of Sexual Characteristics. J. Halban.—Die Entstehung der Geschlechtscharaktere.
58 Zur pathologischen Anatomie der "chronischen Metritis." G. v. Lorentz.
59 Statistik und Klinik der Eklampsie im Grossherzogthum Mecklenburg-Schwerin. O. Böttner (Rostock).
60 Die sogenannten chronischen Metritis, ihre Ursachen und ihre Symptome. A. Theilhaber.
61 Diabetes mellitus und Metritis dissecans, nebst einem Beitrag zur Pathologie der Metritis dissecans. W. Liepmann (Bumm's clinic, Halle). Three fatal cases.

Deutsche medicinische Wochenschrift, Berlin and Leipsic.

62 (XXIX, No. 51.) *Ueber das glycolytische Ferment. F. Blumenthal.
63 Marmorek's Tuberkulose-Serum. J. Goldschmidt (Paris).
64 Ueber die nach Injektion von Diphtherie-Heil-Serum auftretenden Exanthema, insonderheit über die scharlachähnlichen. Oberwinter.
65 *Zur Morphin-Skopolamin-Narkose. G. Volkmann (Zimmermann's clinic, Harburg).
66 Obstacles to Delivery. E. Puppel.—Ueber Geburtshindernisse. Casuistisches.
67 Ueber das "harte traumatische Oedem" des Hand-Rückens. R. Grünbaum.
68 *Ueber das polyvalente Antistreptococcen-Serum. H. Tavel (Berne). (Commenced in preceding number.)
69 Sterilization of Milk by Heating. Thelen (Bremen).—Abtödtung der pathogenen Keime in der Molkereilich durch Erhitzung ohne Schädigung der Milch und Milch-Produkte.
70 Number and Distribution of Physicians in Germany in 1903. G. Hetmann.—Die Aerzte Deutschlands im Jahre 1903.

62. **Glycolytic Ferment.**—Blumenthal's research at von Leyden's clinic has convinced him that sugar metabolism in the organism is due to the action of a ferment present in the cells of various tissues, perhaps of all. This ferment destroys the sugar with formation of carbohydrates, fat acids and small amounts of alcohol. The pancreas possesses the property of stimulating this ferment to activity in some unexplained manner. In severe diabetes none of this glycolytic ferment can be discovered in the liver. He thinks that certain facts speak against Cohnheim's recent assumption that the pancreas and glycolytic ferment alone co-operate—like amboceptor and complement—to induce glycolysis. (See editorial in THE JOURNAL, page 1480, of last volume.) This assumption is hard to reconcile with the established fact that the ferment isolated from the leucocytes has such marked power in this respect. This would require the assumption that the leucocytes also contain the active substance originating in the pancreas, and that it could be isolated by the same technic. The facts observed in dogs after removal of the pancreas also conflict with Cohnheim's announcements. Even after ablation of the pancreas and, hence, entire absence of its activating substance, there is still some sugar metabolism, although comparatively little. The specific substance in the pancreas which makes the glycolytic ferment active displays this power to a marked degree when combined with the latter *in vitro*. The destruction of sugar proceeds very rapidly under these conditions. This fact suggests that after extirpation of the pancreas the destruction of sugar in other organs would be materially reduced. If this assumption be correct, then, in case of severe diabetes, the glycolytic function in the various organs would be partially

or entirely suspended. Examination of the livers of 3 diabetic subjects has confirmed this assumption. Not a trace of glycolysis could be detected in the liver in 2 of the cadavers, and only minimal traces in the other, and this was precisely that of a subject with mild diabetes, who had succumbed to intercurrent pneumonia. Jacoby has also mentioned the entire absence of evidences of glycolysis in the liver from a severe case of diabetes. This material is too limited for general deductions, but in future the liver of diabetics should be tested for glycolysis, both alone and with addition of pancreas. From the therapeutic point of view, these new facts suggest the advisability of organ therapy with the glycolytic ferment, plus pancreas extract. This has been impossible hitherto on account of the difficulty of isolating the glycolytic ferment in a soluble form. When this is accomplished, then we can hope to benefit mild and medium cases of diabetes by injection of the ferment, plus the specific substance from the pancreas. This will promote the sugar destruction in the tissues, especially in the muscles, to an extent sufficient to allow the ingested carbohydrates to be utilized for heat and energy production without calling on the albumin of the body. Even in severe cases some benefit will undoubtedly be derived if these premises are correct. This treatment with the glycolytic ferment will probably not affect the other disturbances in metabolism entailed by the loss of pancreas functioning. It is possible, however, that the pancreas may contain other substances able to influence these other disturbances. This hypothesis is suggested by Jacoby's experience in a certain case in which after administration of 5 gm. pancreas tablets a day the elimination of ammonia which had previously been 2.8 to 3.5 gm. dropped to 1.5 gm. No influence on the elimination of sugar could be detected. In conclusion, Blumenthal comments on the promising outlook for further research on the active substances in the pancreas and their utilization in therapeutics.

65. **Morphin-Scopolamin Narcosis.**—Volkmann describes his experiences with this method of narcosis which he qualifies as a great advance.

66. **Polyvalent Antistreptococcus Serum.**—Tavel gives the details of a few cases out of his experience in which the abdomen had been contaminated with streptococcus pus from some process and the laparotomy wound had been infected. The possibility of such an infection had not been thought of at first, as the excised organs were found sterile. Prophylactic injection of the polyvalent serum was followed by smooth recovery. In other cases the symptoms recurred after suspension of the serum treatment and vanished again on its resumption. As a particularly demonstrative case he cites that of a young man with nephritis and pure cultures of streptococci in the urine. After three weeks of gradual improvement the patient was burned out and caught cold, followed by pleuritis, bronchopneumonia and peritonitis, with symptoms of severe general sepsis. As the salicylates, baths and quinin had no effect, 10 c.c. of the serum were injected, and the next day the patient felt as if new born. The symptoms returned later and a second injection was made the fourth day, after which the temperature dropped as in a crisis, and the patient rapidly recovered. The temperature fell immediately after the first injection from 40 C. to normal, but then gradually rose again, subsiding at once and permanently to normal after the second injection. His clinical and experimental experiences have amply convinced Tavel that the polyvalent antistreptococcus serum, prepared without previous passage through animals, may be actually regarded as a specific against streptococcus infection. The lack of adequate dosage, the difficulty of producing a serum to fit all cases, and the circumstance that the serum, as a specific serum, contains only the amboceptors which stimulate phagocytosis or fasten the complements to the bacteria, while it does not contain the complements themselves which are sometimes lacking in advanced stages of infection—these are the reasons why it is not invariably successful. He adds that if we can succeed in stimulating phagocytosis and in the severer cases supply the missing complements along with the specific serum, then we can count on successfully combating the disease process even in the severest infections. (Tavel's serum was described more fully in THE JOURNAL, xxxix, page 731, 1902.)

Mittellungen a. d. Grenzgebieten der Med. u. Chir., Jena.

Last indexed page 67.

71 (XII, No. 4.) *Affections of Red Marrow in Acute Infections. R. Fraenkel (Hamburg).—Ueber Erkrankungen des roten Knochenmarks, besonders der Wirbel und Rippen, bei akuten Infektionskrankheiten.

72 Connective Tissue Tumors of Stomach. R. Alessandri (Rome).—Fall von gestieltem Magen-Sarkom, nebst Bemerkungen über einige Blindgewebsgeschwülste des Magens.

73 Curvature of Spine in Syringomyelia. Borchard (Posen).—Die Verbiegung der Wirbelsäule bei der S.

74 *Value of Tendon Transplantation in Treatment of Choreatic Forms of Infantile Cerebral Paralysis. A. Wittek (Graz).—Die Bedeutung der Sehnentransplantation für die Behandlung choreatischer Formen der infantilen Zerebrallähmung.

75 Aetiologische Studien über die Epityphlitis. D. v. Hansemann.

76 *Bakteriämie und Sepsis. J. Möller (Altona).

71. **The Red Marrow in Acute Infections.**—Fraenkel has continued his bacteriologic and histologic studies of the red marrow of spine and ribs in acute infectious diseases. After the subsidence of the acute local process the bacteria are liable to persist in the marrow. The pathologic changes in the marrow are the expression of the defensive reaction to the intruding and proliferating bacteria—giant cells, lymphomata, extravasations and cell necrosis. In 18 cases of disease due to the *Diplococcus lanceolatus*—including 13 of pneumonia—the germ was found constantly in the marrow of the vertebræ, more rarely in the ribs. The number of bacteria in the marrow paralleled that in the blood, contrary to what is observed in typhoid fever. The presence of the bacteria in the blood does not seem to affect the prognosis of pneumonia. Death seems to be due more to the action of toxins. In 17 cases of affections due to the streptococcus these germs were found constantly in the marrow. In one of the 7 cases of erysipelas in this group the blood swarmed with the streptococcus and *Staphylococcus aureus*. In 10 cases of scarlet fever streptococci were found in the marrow in every case with the exception of one in which the patient succumbed the second day. In staphylococcus affections (phlegmons, acute spontaneous osteomyelitis), the cocci were found constantly in the marrow. In 13 cases of diphtheria of the throat the marrow was found to be sterile in 3, and diphtheria bacilli were found in it in only one instance; in the others streptococci were constant. In 3 cases of pulmonary phthisis cocci were found constantly in the marrow, but never the tubercle bacillus. In 6 cases of peritonitis the causal agent was found in the marrow in all but one. Four cases of various other affections were investigated. In one of them—a fatal, intermittently febrile mastitis—no cultures could be derived from the marrow. Fraenkel was unable to discover any laws governing the penetration of bacteria into the marrow or the time required. He defends his research against the possible aspersion that his findings might be postmortal phenomena.

74. **Tendon Transplantation in Infantile Cerebral Paralysis.**—A child nearly 10 years old exhibited a severe spastic paraplegia, especially marked in the legs, with choreic and athetotic symptoms, consecutive to encephalitis three years before. He was treated by tendon transplantation. The tendons of the biceps, semitendinosus and semimembranosus were detached and transplanted in the upper edge of the patella, with extension of hip and knee joints. The same operation was then done on the other leg. The results were excellent. The spasmodic movements were improved at the hip joint and completely banished at the knee, while they persisted unmodified at the ankle and toe joints which had not been operated on. The child was able to flex and stretch the knees, previously impossible. Wittek ascribes the improvement to the interposition of new centripetal stimuli by the transplanting of the tendons.

76. **Bacteriemia and Sepsis.**—Möller was able to save 3 out of 13 cases of sepsis in which the blood contained bacteria. One patient was treated with daily injection of 40 c.c. of Marmorek's serum, in addition to the usual saline infusion and extensive surgical intervention. He reports an epidemic of 140 cases of scarlet fever with mortality of 45 per cent. He found streptococci in the heart blood in 11 out of 17 scarlet fever

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cadavers, but not until after the third day. Thirteen of the patients were treated with Arcoleo's serum—all severe cases—with 3 recoveries.

Münchener med. Wochenschrift, Munich.

77 (L, No. 49.) Ueber eine neue Methode der quantitativen Pepsin-Bestimmung nebst Bemerkungen über die Trypsophan-Reaktion und das Pinatein bildende Ferment. P. Volhard (Riegel's clinic, Giessen).

78 *Ueber Psychosen bei Tabes. R. Schultze (Bonn).

79 *Vessel Crises and Their Relation to the Gastric and Abdominal Crises of Tabetics. J. Pal (Vienna).—Gefässkrisen, etc.

80 *Neue Anreicherungs-Methode für Typhus- und Paratyphus-Bacillen. O. Lentz and J. Tietz (Idar).

81 *Limits of Application of Hypnotic Sleep in Psychotherapy. Stegmann (Dresden).—Die Grenzen der Verwendbarkeit hypnotischen Schlafs in der Psychotherapie.

82 *"Occult" Hemorrhages. Schmilinsky (Blamberg).—Bemerkungen zum Nachweis und der Bedeutung makroskopisch nicht erkennbarer Blutbeimengungen zum Inhalt von Magen und Darm.

83 Zur Behandlung des Abortus. M. Nassauer.

84 Tropen-hygienische Erfahrungen in China. Wolffhügel. (Commenced in No. 47.)

85 (No. 50.) Formation of Anthodies. L. Jacobsohn.—Ueber Antikörperbildung nach Injektion von Hymsis.

86 *Action of Blood and Bile on Fermentative Processes. M. Hahn (Munich).—Ueber die Einwirkung von Blut und Galle auf Gärungsvorgänge.

87 Einige Komplement-Fragen. S. Simnitsky (St. Petersburg).

88 *Value of Blood Count in Appendicitis. L. Hahn.—Ueber den Wert der Blutkörperchenzählung bei den akuten Entzündungen der Wurmfortsatzes.

89 *Zur Frage der post-traumatischen Nephritis. S. Oberndorfer.

90 *Ueber Bauchfell-Tuberkulose (of peritoneum). C. Thomsen.

91 *Erfolgreiche Behandlung eines Inoperablen Sarkoms mittels Radium-Strahlen. J. G. Chrysospathes (Athens).

92 Power of Binding Alkali and Titration of Gastric Juice. P. Volhard.—Ueber das Alkalibindungsvermögen und die Titration der Magensäfte. See Ibid. in No. 48.

93 Phenendoscope in Outlining Heart. A. Smith and J. Hofmann. Smith, A.—Ueber die Bestimmung der Herzgrenzen nach Smith mittels des "Phenendoskops."

94 Centennial of Scientific Society. L. W. Wolfberg (Breslau).—Hundertjahrfeier der Schlesischen Gesellschaft für vaterländische Kultur.

95 Remarks on the Late Sensational Case of Sadism. A. Forel (Zurich).—Zum Fall Dippold.

78. **Mental Disturbances in Tabes.**—Schultze describes 2 cases of tabes associated with typical senile melancholia in one, and in the second with dementia precox paranoides. The tabes preceded the psychosis in the first case, but in the second the psychosis had existed four and a half years before the tabes and persisted unmodified by the latter. He regards the psychosis in each case as a casual accompaniment of the tabes and liable to have occurred without the latter. As a rule, when mental disturbances are observed with tabes they are usually of the nature of paralysis. The presence of the tabes alone should not impose the diagnosis of paralysis. Both his patients were syphilitics, and he quotes parenthetically a certain neurologist, who stated that he knew of but a single exception to the law of the connection between syphilis and tabes.

79. **Vessel Crises in Tabes.**—Pal comments on a fact which has hitherto escaped attention, namely, that the gastric crises in tabes are a vasomotor phenomenon. During the crisis of pain the nerve ganglia are extremely sensitive, and he argues that the true seat of the pains is not in the stomach, intestines or heart, but in the sympathetic plexuses. He cites Buch to the effect that in the nervous gastralgia of gastroptosis the pain is referred to the stomach, yet in reality the sensitive aching point can be located at the solar plexus. He further demonstrated that except for the site, the symptoms of angina pectoris coincide with those of nervous gastralgia and enteralgia. Pal has recently announced his discovery that contraction of the smaller vessels of the intestines is liable to induce intense pain. Riegel has recently also called attention to the connection between the pains and the tension of the vessels in lead colic. The intestinal walls have no sensory nerves, but Pal has established by experimental research that contraction of the peripheral vessels in the abdominal viscera interposes an enormous resistance to the blood wave in them. The arterial vessels in the mesentery are in consequence unable to empty themselves; the blood accumulates and they become distended, rigid and tortuous, pulsating violently and pressing on the surrounding tissue. These processes excite the sensory apparatus in the mesentery and especially the extremely sensitive solar plexus, which is further excited by the behavior of its own vessels. He has further established that the major gastric and abdominal crises in tabes are accompanied by a considerable increase in the tension of the vessels, in some instances fully 150 per cent. of the previous tension. He has discovered the still more significant fact that these processes in the vascular system which entail the exalted tension are primary and the cause of the pains in the crises. The attacks of pain do not commence suddenly; their development can be watched after the onset of the extraordinary tension in the vessels. The proof of these affirmations is afforded by the fact, which he has amply established, that it is possible to arrest the pain and the other symptoms of the crisis by reducing the tension of the vessels. It is immaterial whether the tension is combated by internal or external measures, or whether the reduction is accomplished by some intercurrent attack; all that is necessary is the lowering of the vascular tension. If the reduction is only transient the return of hypertension is accompanied by a renewal of the pains. Acute hypertension of the vessels is liable to induce symptoms which he groups as (1) headache and vertigo, (2) transient focal manifestations (amaurosis, asphasia, transient paralysis), and (3) loss of consciousness and convulsions. The first group usually accompanies the crises of tabes and the other groups are observed exceptionally in it, as likewise in lead colic, acute uremia, eclampsia and other processes which, although composed of dissimilar elements and proceeding from dissimilar sources, yet possess in common a hypertension of the vascular system. And it is to this hypertension that therapeutic intervention should be addressed. Treatment varies for each, as some of the conditions are essentially different in each.

80. **"Enriching" Method of Cultivating Typhoid and Paratyphoid Bacilli.**—By the technic described scanty bacilli were induced to multiply 350-fold, and enabled the correct diagnosis to be made in 8 out of 20 positive cases in which it would have been impossible by any other known means. These were the results of 180 single examinations of stools or urine, the other members of the family being always examined with the patient. The technic for the typhoid bacillus is stated to be the simplest and best yet offered, and ideal for the paratyphoid bacillus. The stool is mixed with twice the amount of salt solution, and .1 to .2 c.c. are distributed with a glass spatula over a malachite-green agar plate. The spatula is then transferred to a litmus-lactose agar plate as with the Drigalski-Conradi technic. After twenty hours in the incubator the blue plates are examined first. If no typhoid colonies agglutinating with typhoid serum are discovered on them, or on the green plate, about 2 c.c. of bouillon or salt solution are poured over the plate and a loop with four or five of the most suspicious looking colonies is transferred to two large litmus agar plates. They are then examined again for typhoid and paratyphoid bacilli after a sojourn of sixteen to twenty hours in the incubator. No other bacteria grow on 1/4,000 or 1/8,000 malachite green so vigorously as the paratyphoid bacilli. The agglutinability is somewhat reduced by this technic, but it is regained after transference to the blue plate. The malachite green inhibits or retards the growth of all other bacteria except the dewdrop colonies of alkali-forming bacilli, and these are readily differentiated.

81. **Limitations of Hypnosis in Therapeutics.**—Stegmann ranks hypnosis on a par with other tried and valuable therapeutic measures, although far from a panacea. Its limitations are sharply defined. He thinks that persons with normal psyche are the best subjects, as the effect produced is permanent, while it soon wears off with subjects of hysterical character or weak wills. Functional disturbances are the only ones that can be directly treated by it with success, and it is not the hypnosis but the suggestion which cures. The alterations in the psychic functions may in turn induce organic changes, and thus the hypnosis may indirectly benefit the latter. He has found it a particularly valuable aid for inducing sleep in exhaustion from insomnia, in nervous headache, in alcoholism, and especially in cases of disturbances in the innervation of the heart, respiratory and digestive organs and the urogenital system, although it can be successful only when,

as emphasized above, the disturbances are functional, not organic. Hypnotic sleep has a remarkable effect in sharpening the memory, and this property can be successfully utilized to ascertain the causes of puzzling disturbances. He describes a number of cases of delirium tremens cured by hypnosis, but points out that the subjects were men of normal character, temporarily obscured, but not perverted, while this treatment invariably failed in shallow, hysterically inclined subjects.

82. **"Occult" Blood in Diagnosis of Stomach and Intestinal Affections.**—Schmilinsky qualifies the "occult" blood test as the most important contribution of late years to the diagnosis and prognosis of certain gastro-intestinal affections. He states that the technic of spectrum analysis is much facilitated by transforming the hemoglobin into hemato-porphyrin, which is easily accomplished by adding a few drops of concentrated sulphuric acid to the diluted feces. If the fluid is in a vial with flat walls, the hemato-porphyrin can then be readily distinguished in the spectrum. He asserts that in applying the guaiac test the gradations of tint up to the blue are as characteristic as the blue itself. The scale of tints is first a deep green, then a peculiar changeable tint varying from green to a reddish-brown tint. This becomes more decided and blends into a violet in which first the red is more prominent, until finally the blue predominates. In case of mere traces of blood this scale of tints may not be entirely completed, but any step of the scale is as characteristic as the final blue. He advises that the patient should avoid all medicines, meat and vegetables containing chlorophyll for three days. On the third day the intestines should be evacuated with a very mild saline or with castor oil. He prefers the feces to the stomach content for this test, and seldom uses the latter except when a control is urgent. Beside ulcer and carcinoma, he thinks that the occult bleeding is liable to be encountered in cases of severe motor disturbances. The occult blood is peculiarly valuable for differentiating cases of gastric cancer in which no tumor can be palpated and the motor function is still good. Absence of the occult blood or its disappearance after lavage of the stomach and dieting, renders a malignant process improbable. This is especially valuable for the differential diagnosis between carcinoma and ulcus pylori. (Boas' recent communication on the subject was reviewed on page 1565 of the last volume of THE JOURNAL.)

86. **Action of Blood and Bile on Fermentation Processes.**—Hahn's article is practically a sequel to Jacobsohn's, just preceding. Hahn states that the insignificant results obtained in attempts to produce an antiserum with enzymes are due, he thinks, partially to the defective absorption, but chiefly to the binding and destruction of the injected ferments by the carbohydrates and albuminoids circulating in the blood.

88. **Blood Count in Acute Appendicitis.**—Rehn denies that the blood count is of value for the diagnosis or prognosis of acute appendicitis. Before there is much leucocytosis the patient's fate is usually decided. He tabulates 19 cases in which the blood count was followed by operation. In 2 there was hyperleucocytosis of 28,000 and 40,000, six and thirteen days after the onset of symptoms, and the diagnosis of appendicitis with abscess formation was confirmed by the immediate operation. In 5 the conditions were found to be identical, and yet the leucocytes numbered only 12,000 to 15,000, six to twenty days after onset. In 4 other cases with conditions identical, the leucocytes numbered only 8,000 to 10,000 four to twelve days after the onset, but an abscess was found as in all the other cases above. All the patients recovered after operation. In 6 cases of diffuse peritonitis only one showed leucocytosis of 19,000 and the others had only 11,000 to 14,000 one to nine days after the onset. The only case in this group that did not terminate fatally had a leucocytosis of 14,000. In 2 other cases of diffuse peritonitis, one patient with 8,000 leucocytes the first day after onset recovered, while the other, with 10,000 the fourth day, succumbed. Rehn advocates operating in every case of "fresh perityphlitic tumor."

89. **Post-Traumatic Nephritis.**—Oberndorfer reports a fatal case of acute fatty degeneration of the parenchyma of the kidney which was observed in a restaurant keeper 49 years old. Twenty years previously he had had a brief, transient renal hemorrhage and ten years later had lost a large amount of blood from the amputation of a finger. Otherwise healthy. The symptoms of nephritis developed after an insignificant trauma. In descending the stairs he overlooked the last step and stepped down heavily with his right foot on the floor of the hall. He experienced at once great pain in the leg and could not walk. It was still painful and stiff the next day, and the patient was very restless, with complete insomnia and pulse 120, regular, but small and weak, no appetite. He grew constantly weaker and symptoms of pronounced nephritis became evident the eighteenth day, with death in five days. The pelvic muscles were found lacerated, with considerable extravasation.

90. **Tuberculous Peritonitis.**—Thoenes summarizes the results of operative treatment of tuberculous peritonitis in his experience at Hamburg in the statement that 10 out of 21 cases were cured by the intervention. This is an average of 48 per cent. The 10 cases without adhesions were all cured but 2, but only 2 were cured in the 11 cases with adhesions. The Göttingen statistics are still more favorable, having 12 cured out of 19 with serous exudate and 3 out of 6 with adhesions. That is, 60 per cent. recoveries in all—15 out of 25 cases. The general average in the literature is 61.3 per cent. recoveries in the form with serous exudate, that is, 114 cases out of 186; 30.6 per cent. recoveries in the 55 cases with adhesions, and a general average of 54.1 per cent. recoveries—132 cases out of 244. He states, on the other hand, that the published statistics of internal treatment alone show only 38 recoveries in 82 cases, an average of 46.2 per cent.

91. **Successful Treatment of an Inoperable Sarcoma with Roentgen Rays.**—[This communication attracts attention—aside from its subject—as our confrère in Athens, Greece, seems to be so familiar with American contributions and quotes extensively and almost exclusively from THE JOURNAL and other American medical papers, although he gives due credit to the French and Germans. His therapeutic efforts were evidently based on the work of Americans.—ED.] The patient was a woman of 35, and the tumor in the right hypogastrium was found at the laparotomy to be an inoperable, round-celled sarcoma. Cachexia was already marked. Five months after clinical healing under *x*-ray treatment, the patient returned for advice in regard to impending obesity, which fact emphasizes the completeness of the cure attained.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

ORGANIC AND PHYSIOLOGIC CHEMISTRY. A Manual for Students and Practitioners. By Alexius McGlannan, M.D., Associate Professor of Physiologic Chemistry, Instructor in Clinical Laboratory, College of P. and S., Baltimore. Series Edited by V. C. Pedersen, A.M., M.D., Instructor in Surgery and Anesthetist and Instructor in Anesthesia of the New York Polyclinic Medical School and Hospital. Illustrated with 9 Engravings. Cloth. Pp. 346. Price, $1.00. Philadelphia and New York: Lea Brothers & Co.

TREATMENT OF NEURASTHENIA. By A. Proust, Professor à la Faculté de Médecine de Paris, and Gilbert Ballet, Professor agrégé à la Faculté de Médecine de Paris, Medecin de l'hopital Saint-Antoine. Translated by Peter Campbell Smith, L.R.C.P., L.R.C.S., Edin., L.F.P.S., Glasg. Cloth. Pp. 213. Price, $2.00. New York: Edward B. Pelton. 1903.

THE PRACTICAL CARE OF THE BABY. By Theron Wendell Kilmer, M.D., Associate Professor of Diseases of Children in the New York School for Clinical Medicine. Cloth. 12mo. Pages, xiv-154, with 62 Illustrations. Price, $1.00 net, delivered. Philadelphia: F. A. Davis Company.

ANATOMY APPLIED TO MEDICINE AND SURGERY. By D. E. Mundell, B.A., M.D., Professor of Applied Anatomy, Faculty of Medicine, Queen's University. Cloth. Pp. 499. Price, $3.00. Kingston: Printed at the British Whig. 1903. New York: E. R. Pelton.

THE PRACTITIONER'S GUIDE TO THE DIAGNOSIS AND TREATMENT OF DISEASES OF WOMEN. By Gustavus M. Bloch, Professor of Operative Surgery, Jenner Medical College. Cloth. Pp. 112. Price, $1.00. Chicago: M. Robertson & Co. 1903.

THE TRANSACTIONS OF THE SOCIETY OF ANESTHETISTS. Volume VI. Cardboard. Pp. 86. London: John Bale, Sons and Danielsson, Ltd. 1903.